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No. 5

GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

MONTHLY REPORT
SEPTEMBER, 1938



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GOVERNMENT OF NORTHERN IRELAND
MINISTRY OF AGRICULTURE

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CONTENTS

	PAGE
AGRICULTURAL CONDITIONS:—	
THE CROPS, SUPPLIES AND PRICES	245
LIVE STOCK	248
THE COST OF LIVING INDEX FIGURE	249
THE MARKETS DURING AUGUST	249
TABLE OF EGG PRICES	250
 Agricultural Statistics for Northern Ireland,	 251
 MARKETING SCHEMES:—	
Agricultural Marketing (Pig Industry) Act (N.I.), 1934:—	
PIG PRICES FOR SEPTEMBER, 1938	253
GRADING STATISTICS	255
COST OF STANDARD PIG RATION	256
 The Cattle Industry (Emergency Provisions) Acts, 1934 and 1935, and The Livestock Industry Act, 1937	 257
 Wheat Act, 1932:—	
WHEAT DEFICIENCY PAYMENTS, CEREAL YEAR 1937/38	258
THE WHEAT COMMISSION PAY 1/7d. PER CWT. TO WHEAT GROWERS FOR 1937/38	258
 Milk and Milk Products Acts (N.I.), 1934-1938:—	
DETERMINATION OF THE JOINT MILK COUNCIL	260

	PAGE
AGRICULTURAL NOTES:—	
SEASONAL FARM NOTES	261
SEASONAL LIVESTOCK NOTES	263
SEASONAL GARDEN AND ORCHARD NOTES	264
SEASONAL POULTRY-KEEPING NOTES	266
ANNOUNCEMENTS AND REMINDERS:—	
IMPORTATION OF SHEEP INTO NORTHERN IRELAND FROM SCOTLAND	268
GENERAL	269
MILK PROSECUTION	271
SIXTEENTH EGG-LAYING TEST AT STORMONT—	
FINAL RESULTS	271
LIST OF AWARDS	276
LIST OF COPPER AND BRASS RINGS AWARDED	279
AGRICULTURAL PRICES:—	
FEEDING STUFFS AT SPECIFIED CENTRES	284
FEEDING STUFFS (WITH CALCULATED VALUES OF PROTEIN AND STARCH EQUIVALENTS)	285
TRADE AND PRICES OF LIVESTOCK AT BELFAST AUCTION MARTS	290
FAT STOCK	290
OTHER STOCK	291
LIVE STOCK AT FAIRS	292
AGRICULTURAL TRADE RETURNS:—	
SHIPMENTS OF LIVE STOCK FROM NORTHERN IRELAND PORTS	293
IMPORTS AND EXPORTS OF AGRICULTURAL PRODUCTS	294
NUMBERS OF CATTLE AND ACCOUNT OF TRADE AT FAIRS	295

MINISTRY OF AGRICULTURE

MONTHLY REPORT

SEPTEMBER, 1938.

Farmers have been busy with the harvest work during the excellent weather prevailing up to time of writing, mid-September, and the prospect of a good harvest of grain, as indicated in this report, has, in consequence, been considerably enhanced. With appreciably increased acreages recorded in the case of oats, wheat and barley, and good yields anticipated, production should be well above recent years. The increased area under oats, the principal grain crop in Northern Ireland, and the satisfactory state of this crop throughout the country ensures that production will have been increased to a higher level than in any season since 1930. The area under wheat is larger than for the past two seasons, whilst the production of barley will be the highest recorded since 1914. The flax crop also was grown on a slightly larger scale than in the preceding year, and although estimates of the probable yield vary considerably, the total production will be somewhat similar to that of last year. Potatoes were slightly down in acreage on the year, and here again it is difficult to estimate the production this season on account of the variability of the crop throughout the country. Roughly speaking, however, production will not show an appreciable change on the year.

On the whole, therefore, this year's harvest should prove a source of general satisfaction, and possibly mitigate to some extent the feeling of disappointment caused by the lower prices ruling for all classes of live stock compared with those at this time last year. The seasonal sheep sales, especially, have been the cause of some uneasiness on account of the slump in trade and the fall in prices compared with last year, but it should be remembered that values of store sheep last year, as indeed of store cattle during the greater part of this year, were rather much on the high side, compared with prices of fat animals, to be maintained for any considerable time.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st SEPTEMBER, 1938.

The first fortnight of August was, in the main, favourable for field work. The saving of late-cut meadow hay occupied chief attention, and this work progressed so well that only a relatively small proportion of the crop now remains to be harvested. The cutting of corn crops also progressed rapidly in the early districts, and most of the work entailed in the harvesting of the flax crop was completed. Unfortunately, with the early return of unsettled weather at the middle of August, harvesting operations suffered a check, and although some progress was possible during the dry spells between the intermittent heavy rainstorms, work in the fields was indeed comparatively slow and difficult in the latter half of the month. Following the heavy thunderstorm on the 19th, a fall of hail preceded a spell of cooler weather, particularly at night and early morning. Later in the month there was some slight general improvement in outdoor conditions, with longer intervals between the rain-showers and a rise in temperature, but at the close of the month conditions again became cool.

The storms and heavy rains of the latter half of August caused considerable damage to standing grain crops, and the crops that became partially lodged or tossed will be difficult to harvest. Much of the hay, too, has suffered in quality from weathering during this period. Blight spread rapidly in unsprayed crops of potatoes, but the cooler weather in the second half of the month helped to check the ravages of the disease which, from all accounts, appears generally to have been held better in check than in some former years.

As already indicated, the general lateness of the crops in ripening this season was advantageous in that the crops were not ready for harvesting, and therefore the adverse weather of late August did not interfere with that work.

Oats were especially backward in ripening, and a start was not even then possible with the cutting of this crop on many farms. Throughout practically the whole of the country the harvesting of the grain crops was only becoming general at the end of the month.

Although accounts differ to an appreciable extent, this year's harvest of grain will, in general, be a good one. Wheat in particular is a good crop, the crops of barley and oats are satisfactory, and unless weather conditions continue unfavourable, the grain should be of good average quality.

Hay is a better crop than was at one time expected, and perhaps on the whole the yield is a little above that of a year ago, but the quality generally is not up to average as a result of the bad weather experienced during harvesting. The average yield of grass seed is likely to be lower on the year, but the total quantity may be even greater than usual, as many farmers who did not get the hay cut in time allowed it to ripen out and harvested it for threshing. Potatoes may prove to have not improved sufficiently of late to assure average yields, although there are reports of many excellent crops. The present position of the other root crops is, however, most encouraging.

The condition of pasture lands remained exceptionally good, the grass being plentiful and of good quality. The heavy rainfalls of late, and the lower temperatures will, however, tend to reduce rapidly the feeding value of the grass, especially that on heavy and badly drained soils.

Purchased foods for live stock have, if anything, declined in use, principally as the result of the fall in values of cattle, and the prices of the principal foods moved further in buyers' favour during August.

All classes of cattle and sheep have been maintained in a good, healthy condition, and outbreaks of "hoose" and "redwater" in grazing cattle, of "felon" in dairy herds, and of maggotting in sheep, appear to be relatively light in extent.

THE CROPS.

WHEAT.—In most early districts wheat has been cut and is in stook, but on account of the lateness of the ripening of the crop in general this year there is still a fair amount of this work to be done in the late districts. The crop ripened out well during the warm and sunny weather of the earlier part of August, and although the harvest has been delayed slightly, it should prove a very good one, especially in the case of the early sown crops, most of which have given very good results this year. Harvesting was in full swing at the end of the month, and the general expectations are that the average yield will be higher than for some years past.

OATS.—A good start has been made with the harvesting of this crop in nearly all districts. Comparatively speaking, oats were rather more backward than wheat in ripening, and many crops in the later districts were still in a green state at the end of August. In the heavy soil areas where the crop made very good growth during the warm and moist spells, much of it was "lodged" or "tossed" by the heavy rains and storms, and will be difficult to cut and save. Should, however, the weather be favourable for the completion of the harvest, the yields of grain and of straw should exceed average dimensions, and the quality be satisfactory.

At last month's markets the decreased supplies of last season's white oats on offer were fetching an average price of 7/9½d. per cwt., which is similar to the quotation for the month of July, and compares with 9/4d. per cwt. for August, 1937.

BARLEY.—The harvesting of this crop is also a little behind that of a normal season, and while much of it has been cut, there is still a fair proportion standing in the late districts. As in the case of oats, a considerable portion of the crop was badly tossed by the rainstorms—much more so than in recent years—but it is not expected that the damage done will be appreciable. Otherwise the crop is most promising, and high yields of grain and straw of good quality are expected to be obtained.

FLAX.—The position of the crop varies to a considerable degree throughout the country. The effect of the drought at sowing time was reflected in the unevenness of growth in many fields, and despite the fact that the bulk of the crop when growing was distinctly promising, in many cases the general belief is that the yields of scutched flax will be rather short of those obtained last year. Most of the crop was pulled during the earlier part of the month, and retting operations are in progress. Pulling was more difficult this year than usual, the heavy growth of weeds handicapping the workers considerably.

POTATOES.—The growing crop presented many contrasts last month, and it is difficult to compare the entire crop on an average basis with those of previous seasons. There was a marked general improvement in growth during August, and in some areas where the crop escaped blight and is still growing out, the prospects of heavy yields are very good. The general incidence of blight was not more than normal this season, but with many fields showing extensive gaps through "misses" and with the foliage dying down rapidly during the month before the crop had grown out fully, it may be that the average yield of good marketable potatoes for the country as a whole will be below average. The wet weather this year prevented thorough cultivations of this crop during the later part of the growing season, and weeds made great headway, whilst those farmers who ignored the advice to spray their crops early to prevent the spread of blight were penalised later when wet weather further delayed this work, and the disease made inroads on the foliage with serious results. This was particularly common in some heavy soil areas where growth was rapid during the damp and warm weather, and where good heavy yields, free of diseased tubers, would have been expected had the foliage been protected by the spray mixture applied at the critical time.

Most of the early and second early varieties of potatoes have been dug, and the yields have varied slightly from fair to average dimensions. The quality is generally much the same as usual, although in the case of some crops the tubers are now showing the effects of blight. Some early main crops have been dug, and the yields have been rather disappointing.

The demand for potatoes for shipment to Great Britain last month remained very quiet, and although supplies marketed for local consumption decreased slightly on the month, they were adequate for requirements, and appreciably cheaper. The early varieties fell in value by $2/1\frac{1}{2}$ d. to around $3/3$ d. per cwt. with British Queen $3/-$ cheaper at $3/2$ d. The increased supplies of new season's main crop at local markets at the close of the month were fetching around $3/-$ per cwt., which is similar to the quotation at the opening markets last year.

MANGELS.—A few crops are in only fair condition, but as a general rule mangels have made good growth of late, and are in a very promising state. Weeds are prevalent everywhere, as the work of after cultivation was rendered almost impossible by wet weather. The yields should give general satisfaction.

TURNIPS.—Recent weather conditions favoured the growth of turnips also, which have now fully recovered from the earlier setback at the drought period. Some fields have excellent crops. It is reckoned that the yield will be fully up to average dimensions.

The very weedy state of the turnip fields reflects the difficulties which confronted the work of after cultivation, much of which was perforce somewhat neglected this year.

HAY.—With the exception of a few late meadows, all this crop has been cut and is in ricks. In the early districts the greater portion is now in the stackyard. Reports on the crop vary according to districts, but in most instances it seems that while the average yield of upland hay will be lighter than last season, meadow hay is a heavier crop. Growth, which was late this year, was greatly stimulated by the moist and warm weather of mid-summer, and with the delay in ripening, cutting began after the normal time. This favoured the harvesting of meadow hay, which is reported to be of good quality and of heavy bulk. The quality of this year's hay crop generally is variable, depending on the conditions under which it was saved, but the larger portion of the upland hay is of lower quality than last year.

Only small quantities of hay have been threshed for seed, and judging from the results and the general appearance of the crop, the yields of grass seed will be below those of last season. This is attributed to the dry spring and to the effects of the frosts at the flowering stage. The crop was difficult to save and handle in many cases. Perennial appears to have been most affected by unfavourable conditions, and the seed is light and of lower quality than usual. Italian is stated to have given a slightly higher yield of seed than Perennial, but it too is below that of a year ago, and Crested Dogstail is also only a fair crop. Yields all over, therefore, will be smaller and the quality less satisfactory than for the previous season.

Increased quantities of upland hay were marketed during August, a fair proportion of which was of the new season's crop, and prices dropped on the month, the old crop averaging 60/6d. per ton as against 66/- for the previous month. New season's upland hay opened at 50/6d. per ton, and the last of the old season's meadow hay marketed at Belfast averaged 51/2d. per ton, a rise of 1/2d. on the figure for the preceding month.

The first small supply of Perennial rye-grass seed marketed last month was sold at an average price of 14/3d. per cwt., which compares with 8/2d. per cwt. at the beginning of last season.

LIVE STOCK.

CATTLE.—The general health and condition of the herds continue satisfactory. With good nutritious grass plentiful, cattle being fattened on pastures made a good thrive during the month. Very little hand feeding was necessary, and with feeding stuffs still comparatively high in price, and fat stock prices relatively below those of stores, owners were able to keep the costs of production down to a minimum. "Hoose" affected some young cattle in a few districts, as did also "redwater", but otherwise the bill of health was clean.

Dairy stock were maintained in fairly good condition. "Felon" was troublesome in some districts during the wet weather, but the general health is normally good. Calving proceeded satisfactorily, and only a relatively few cases of abortion occurred. The milk yield was well maintained at the usual seasonal level throughout the country up to the arrival of wet and cooler weather in late August, when a slight falling off in supplies was noticeable in some areas.

Small to average turnouts of store animals at fairs held during August met a slower demand, and except for a good type of well-conditioned animal at from £10 per head and upwards, sales were difficult to make, and prices a little cheaper on the month. The moderate supplies of beef cattle at fairs were a steady trade at most centres, but here again prices moved in a downward direction, on account of the withdrawal of buying support from shippers. The best demand in the cattle trade last month was for dairy animals, and sales of good quality stock, especially springers, were readily effected. Prices in this section were generally little altered on the month and compared favourably with those at this time last year.

SHEEP.—All classes are in fairly good condition and healthy. The lambs have made a satisfactory thrive in most districts, but in some they are reported to be rather backward although a good healthy lot. Maggots appear to be less troublesome than usual despite the showery weather. Supplies at fairs held during August were up to seasonal high levels, and much

in excess of requirements. Trade continued rather disappointing, and except for a moderate enquiry for good types of cross-bred breeding ewes and well-finished fat lambs, business was very restricted at disappointing prices. All over, values were down on the year, especially in the case of secondary or lower grade stock.

Pigs.—Supplies of young pigs at fairs were generally up to requirements. The demand fluctuated but slightly, and sales were made fairly steadily at around former quotations. Sows for breeding were in limited numbers at fairs and a small trade was passing at unchanged rates.

Good supplies of dead pigs for the roll and ham trade were clearing steadily throughout the month.

Horses.—The demand for farm horses last month was quiet, and relatively few sales were effected. Prices, where altered, moved in a downward direction. Good strong farm horses were quoted at from £35 to £50 each, whilst ordinary types of useful workers varied in price from £15 to £30 each.

Milk.—The milk yield was generally maintained at a normal level for the month, and creameries paid at prices which varied from 4½d. to 5d. per gallon for milk delivered, the separated milk being returned to the farmer.

The rate of equalisation payments for milk produced in Northern Ireland and delivered to creameries for manufacturing purposes has been determined at 0.29d. per gallon for the month of July, 1938, in accordance with the Milk and Milk Products Acts (Northern Ireland), 1934 to 1938. It should be noted that under the Regulations creameries are required to distribute the equalisation payments in accordance with the butter-fat content of the milk received from each supplier.

THE COST OF LIVING INDEX FIGURE.

The cost of maintaining unchanged the pre-War standard of living of working-class families at August 2nd, was approximately 56 per cent. over the level of July, 1914, and compares with 59 per cent. at July 1st, 1938, and 55 per cent. a year ago.

At August 2nd, the index of retail prices of food in Great Britain and Northern Ireland, as ascertained by the Ministry of Labour, was 41 per cent. above the level of July, 1914, as against 46 per cent. at July 1st, 1938, and 40 per cent. at July 31st, 1937. The fall in the index was mainly due to a marked decline in the prices of potatoes during the period under review.

THE MARKETS DURING AUGUST.

With the exception of cabbage, supplies of the principal home-grown vegetables marketed during the month showed further seasonal increases, and prices in most instances had an easier tendency. Cabbage was the only

vegetable in shorter supply, and was slightly dearer, the average quotation increasing by $\frac{1}{2}$ d. to $1/2\frac{1}{2}$ d. per dozen. Cauliflower were reduced in price by $1/1\frac{1}{2}$ d. to $2/4$ d. per dozen, leeks by 3d. to 6d. per bunch, and parsnips by $2\frac{3}{4}$ d. to $5\frac{1}{4}$ d. per bunch. Carrots and parsley were unchanged in price at 7d. and 6d. per bunch respectively. New season's supplies of garden turnips marketed at Belfast during the month fetched from 4d. to 8d. per bunch.

In the provision section, farmers' butter was marketed in slightly larger quantities than in July. Print butter was unaltered in price at $1/2\frac{1}{2}$ d. per lb., and lump was $\frac{1}{4}$ d. cheaper at $1/2$ d. per lb. Eggs were seasonally reduced in supply and dearer. Prices, as fixed by the Ministry of Agriculture, firmed during the month as shown in the table below. In the poultry section supplies of hens, chickens and ducks were smaller than in the previous month. Chickens were $3\frac{1}{2}$ d. cheaper at $1/10\frac{1}{4}$ d. each; ducks $\frac{1}{2}$ d. dearer at $2/4$ d. each, while hens made late rates at $1/6\frac{3}{4}$ d. each. The price per lb. live weight paid by wholesale merchants eased slightly in the month, and ranged from $5\frac{1}{2}$ d. to $7\frac{1}{2}$ d. for chickens; 4d. to 5d. for hens, and 4d. to 6d. for ducks.

Slightly decreased supplies of wool were marketed at firmer rates. Long (unwashed) wool was $\frac{1}{2}$ d. dearer at 6d. per lb., and mountain (unwashed) wool was 1d. dearer at 5d. per lb.

MARKETING OF EGGS ACTS (N.I.) 1924—1937.

WHOLESALE DEALERS' PRICES.

The following table shows the prices fixed by the Ministry, and payable by licensed wholesale dealers, for eggs purchased from producers during the following weeks, as compared with the average prices at markets for the corresponding weeks of 1937.

Week Ended	1938				1937			
	Hen eggs per lb.*		Duck eggs per dozen.*		Hen eggs per lb.		Duck eggs per dozen	
	s.	d.	s.	d.	s.	d.	s.	d.
August, 6th	0	10	1	0	0	$9\frac{3}{4}$	0	$11\frac{1}{2}$
" 13th	0	$10\frac{1}{2}$	1	0	0	$9\frac{3}{4}$	1	0
" 20th	0	11	1	1	0	$9\frac{3}{4}$	0	$11\frac{1}{2}$
" 27th	0	$11\frac{1}{2}$	1	1	0	$10\frac{1}{2}$	1	$0\frac{1}{2}$
September 3rd	1	$0\frac{1}{2}$	1	2	0	11	1	$1\frac{1}{4}$

*Where hen eggs are delivered by the producer to the packing store of a licensed wholesale dealer of Class A an additional $\frac{1}{2}$ d. per lb. is payable; in the case of duck eggs an additional $\frac{3}{4}$ d. is payable for each complete dozen so delivered.

Payment on a quality basis came into operation during the week ended 5th March, 1938. The following were the standard deductions:—

Hen Eggs: "Seconds" and soiled eggs $\frac{1}{2}$ d. per egg, Rejects $1\frac{1}{2}$ d. per egg during weeks ended 6th, 13th and 20th August, afterwards $1\frac{1}{2}$ d. per egg.

Duck Eggs: Rejects 1d. per egg.

AGRICULTURAL STATISTICS FOR NORTHERN IRELAND.

Preliminary Statement showing the acreage under the principal varieties of potatoes in 1938, with comparative figures for the years 1933-37 inclusive.

Variety			1938	1937	1936	1935	1934	1933
			acres	acres	acres	acres	acres	acres
Arran Victory	...	I	55,340	56,850	55,030	50,539	51,895	53,467
Kerr's Pink	...	I	31,417	31,179	33,623	32,999	35,350	35,829
Arran Banner	...	I	12,621	11,845	10,902	8,831	7,057	4,962
British Queen	...	N	6,419	7,037	7,353	7,604	8,452	8,024
Arran Consul	...	I	5,408	5,722	6,584	7,515	6,986	6,875
Up-to-Date	...	N	2,619	2,829	4,980	7,468	11,411	11,622
Arran Chief	...	N	2,074	2,714	3,330	4,479	5,636	6,473
Epicure	...	N	1,936	2,196	2,076	2,214	2,527	2,550
Majestic	...	I	1,772	1,487	1,369	998	582	306
Champion	...	I	543	602	1,111	1,375	1,728	2,497
Arran Cairn	...	I	329	744	2,014	396	21	—
Other Varieties	...	—	3,008	2,221	3,368	4,597	5,676	6,416
TOTAL			123,486	125,426	131,740	129,015	137,321	139,021

I.—Immune.

N.—Non-Immune.

The area under potatoes in Northern Ireland this year shows a further decrease of 1,940 acres, or 1.5 per cent. ; the area in Eire also declined by 1,400 acres, or 0.4 per cent. In England and Wales, however, an increase of 19,300 acres, or 4.2 per cent. was recorded. In Scotland the area increased by 3,000 acres, or 2.2 per cent.

The varieties, Arran Victory and Kerr's Pink, continue to be the most popular of those grown in this country, the area under the former being almost 45 per cent. of the total area, while the latter accounts for 25 per cent. of the total area planted. The area under the Arran Victory variety, however, declined by 1,510 acres as compared with the figure for the previous year, while the area under Kerr's Pink shows an increase of 238 acres. With the exception of Arran Banner and Majestic, all the other principal varieties show a decrease in area. The area under Arran Banner increased by 776 acres, or almost 7 per cent., and Majestic by 285 acres, or 19 per cent. The

greatest decreases were recorded in the areas under British Queen by 618 acres, or 9 per cent., and Arran Chief by 640 acres, or 24 per cent. A decrease of 210 acres, or 7 per cent., was recorded in the acreage under the Up-to-Date variety. Arran Consul declined in area by 314 acres, or 5 per cent., Epicure by 260 acres, or 12 per cent., Arran Cairn by 415 acres, or 56 per cent., and Champion by 59 acres, or 10 per cent.

Of the total area under potatoes in Northern Ireland, viz., 123,486 acres, 109,640 acres, or 89 per cent., are of varieties immune from Black Scab or Wart Disease.

The following table shows the percentage of the total area planted with immune varieties for the period 1929 to 1938, and it will be observed that there has been a steady increase throughout this period in the acreage planted with immune varieties.

1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
89%	88%	86%	82%	78%	78%	76%	74%	70%	69%

MARKETING SCHEMES.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.) 1934.

PIG PRICES FOR SEPTEMBER, 1938.

The following announcement has been made by the Pig Industry Council for Northern Ireland.

PRICES FOR DEAD PIGS.

The prices per dead cwt. for dead pigs sold by producers to curers in Northern Ireland in September, 1938, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Partly Black Pigs.
c.1.0.21 to c.1.1.13	66/11	63/11	60/11	56/11	5/- below relevant Grade Price.
c.1.1.14 to c.1.2.3	70/11	67/11	64/11	60/11	
Weight Class. (Dead Weight)	Grade A.	Grade B.	Grade C.	U.L. or U.F.	
c.1.2.4 to c.1.2.14	70/11	67/11	64/11	61/11	
c.1.2.15 to c.1.3.14	70/11	67/11	64/11	61/11	
c.1.3.15 to c.2.0.0	67/11	64/11	61/11	58/11	
c.2.0.1 to c.2.0.14	61/11	58/11	55/11	52/11	

Pig Carcases c.1.0.0 to c.1.0.20 :—63/11

(N.B. These prices are the same as those fixed for August, 1938).

Authorised cuts:—

- (a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.
- (b) Broken ham (wet break)—12½% of the gross value of the carcase.
- (c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase is condemned on account of disease the existence of which could not reasonably have been known to the producer before despatch to the curer, the appropriate grade price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply. If the carcase is wholly condemned on account of disease

the existence of which could not reasonably have been known to the producer before despatch to the curer the relevant Grade 2 or Grade B price (or fixed price if the carcase weighs not less than 1 cwt. 0 qr. 0 lb. and not more than 1 cwt. 0 qr. 20 lb.) shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcasses weighing under c.1.0.0 or over c.2.0.14, and (b) pigs visibly diagnosable as diseased before despatch by the producer and subsequently condemned; emaciated or screw pigs, smelling pig carcasses with definite indications of putrefaction, and pig carcasses badly abused or damaged before being handed over by the producer to the curer.

PRICES FOR WILTSHIRE PIGS SOLD ON DIRECT CONTRACT.

In the case of pigs sold alive under direct contract to Wiltshire curers the prices per dead cwt. payable for pigs delivered in respect of the month of September, 1938, are as follows:—

Weight Class. (Dead Weight)	Grade 1.	Grade 2.	Grade 3.	U.L. or U.F.	Unsuitable.
c.1.0.21 to c.1.1.13	76/11	73/11	70/11	66/11	63/11
c.1.1.14 to c.1.2.3	76/11	73/11	70/11	66/11	63/11
	Grade A.	Grade B.	Grade C.		U.L. or U.F.
c.1.2.4 to c.1.2.7	73/11	70/11	67/11		64/11
c.1.0.0 to c.1.0.20	Suitable 65/11		Unsuitable 63/11		
Over c.1.2.7	On the same basis as pigs sold dead				

(N.B. These prices are the same as those fixed for August, 1938).

PRICES FOR LIVE PIGS SOLD TO THE PIGS MARKETING BOARD (NORTHERN IRELAND).

In the case of pigs sold alive to the Pigs Marketing Board during September, 1938, the prices per live cwt., according to grade, are as follows:—

Live Weight.	Grade 1.	Grade 2.	Grade 3.	Unsuitable.
c.1.1.14 to c.1.2.13	49/6	49/6	49/6	48/-
c.1.2.14 to c.2.0.0	57/9	55/6	53/3	U.L. or U.F. 50/3 48/-
c.2.0.1 to c.2.1.14	51/9	49/6	47/3	45/-
c.2.1.15 to c.2.2.7	49/6	47/3	45/-	42/9
c.2.2.8 to c.2.2.21	45/-	42/9	40/6	38/3

(N.B. These prices are the same as those fixed for August, 1938).

These prices do not apply to live pigs under c.1.1.14 or over c.2.2.21, live pigs intended for breeding, live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside the weights c.1.2.0 to c.2.2.21 can be sold only to the Board.

AUTHORISED DEDUCTIONS.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a levy at present amounting to 4/-.

In addition to this amount, a deduction of 4d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

GRADING STATISTICS.

Table showing the percentages of pig carcasses falling within the weight and grade classes indicated during June, 1938.

Under c.1.0.21		c.1.0.21 to c.1.1.13					c.1.1.14 to c.1.2.3					Totals
Suitable	Un-suitable	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	Grade 1	Grade 2	Grade 3	U.L. & U.F.	U.	
1.32	.15	2.99	1.60	.69	.23	.01	5.18	6.03	3.03	1.59	.01	22.83

Grade A.				Grade B.				Grade C.				
1	2	3	4	1	2	3	4	1	2	3	4	
8.52	19.85	2.76	.40	6.71	18.92	3.36	.76	2.66	8.37	1.10	.21	73.62

Ungraded Carcasses.

Under Grade A measurements. U.L.	Over Grade C measurements U.F.	Wholly condemned U1.	Wholly black, injured or damaged U2.	Overweights, boars, sows, etc. X.	Partly Black Y.	
.02	2.69	.05	.39	.39	.01	3.55
Total						100%

These figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

The volume of trade in pig carcasses showed a slight increase on the previous month. The average value per carcase cheapened further by 7d. to £5 10s. 10d. The average weight remained unchanged at c.1.2.18, and the average price per cwt. declined by 3d. to £3 6s. 11d.

The following table gives the percentage results of an analysis of the purchase and grading statements furnished by Wiltshire Bacon Curers in respect of live pigs delivered on direct contract by producers during the month of July, 1938.

Weight Class.	Grade 1.	Grade 2.	Grade 3.	Unsuitable U.L. or U.F.	Total
Under c.1.0.0					—
c.1.0.0 to c.1.0.20					1.32
c.1.0.21 to c.1.2.3	48.57	30.73	7.10	3.08	89.48
	Grade A.	Grade B.	Grade C.		
c.1.2.4 to c.1.2.7	2.09	1.93	.66		4.68
c.1.2.8 to c.1.3.14	1.27	2.37	.77	.11	4.52
				Total	100.0

The average net price per cwt. in respect of these deliveries works out at £3 11s. 11d. after making allowance for insurance and contribution to the Pigs Marketing Board.

The average weight works out at c.1.1.18½, the net average price per pig being £5 1s. 10d.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration for the sixteen weeks' period ended 20th August, was 9/9d. The average price for the similar period ended 23rd July, was 9/10¼d. These figures have been calculated by the Ministry from returns collected from 10 representative centres in Northern Ireland.

The following is the ration upon which the feeding cost is based:—

Maize Meal	...	...	...	30%
Barley Meal	...	...	...	30%
White Pollards	...	...	...	20%
White Bran	...	...	...	10%
Meat Meal (60% Protein)	...	...	...	10%

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935 AND THE LIVESTOCK INDUSTRY ACT, 1937.

The following is a summary made under these Acts up to and including 27th August, 1938.

<i>Live Weight</i>	<i>Number of Animals</i>	<i>Total amount paid</i>		
		£	s.	d.
England and Wales ..	4,353,258	10,549,833	0	11
Scotland ..	1,339,191	3,450,717	16	11
Northern Ireland ..	455,648	960,090	15	6
Total (United Kingdom) ..	6,148,097	14,960,641	13	4
<i>Dead Weight</i>				
England and Wales ..	136,466	342,657	14	8
Scotland ..	40,644	115,549	14	9
Total (Great Britain) ..	177,110	458,207	9	5

NUMBERS CERTIFIED FOR SUBSIDY.

The numbers of fat cattle certified for payment of subsidy, published by the Livestock Commission in respect of the month of July, 1938, are shown hereunder.

	July, 1938.					Corresponding totals in	
	Home-bred		Imported		Total	July, 1937	July, 1936
	Ordinary Grade	Quality Grade	Ordinary Grade	Quality Grade			
England ..	21,482	29,920	7,184	16,815	75,404	93,375	88,499
Wales ..	1,957	1,720	43	206	3,926	5,003	5,104
Scotland ..	2,024	12,326	1,136	9,170	24,656	25,352	27,227
Northern Ireland	4,899	1,112	442	218	6,671	7,148	9,166
United Kingdom	30,362	45,078	8,808	26,409	110,657	130,878	129,996

As the great majority of fat stock markets are held on the early days of the week the rate of marketing of fat cattle cannot be judged accurately from the number of animals marketed in a calendar month. For comparative purposes appropriate weights are applied by the Livestock Commission to each day of the week, and the figures for each calendar month are adjusted accordingly, so as to allow as far as possible for the fact that a large number of markets are held on Mondays, and that the number of markets held decreases day by day as the week proceeds. The adjusted figures for July, 1938, 1937 and 1936, are 116,123, 134,623 and 130,604 respectively.

The average prices per live cwt. of certified cattle in July, 1938, have been :

	July, 1938						Corresponding averages in			
	Ordinary Grade		Quality Grade		Average		July, 1937		July, 1936	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
England	38	9	42	6	41	1	—	—	—	—
Wales	40	1	42	8	41	4	—	—	—	—
England & Wales ..	38	10	42	6	41	1	42	7	37	4
Scotland	40	10	44	5	43	11	48	3	39	2
Northern Ireland ..	38	2	39	4	38	5	40	9	33	1
United Kingdom ..	38	11	43	0	41	8	43	8	37	6

WHEAT ACT, 1932.

Wheat Deficiency Payments, Cereal Year 1937-38.

The Minister of Agriculture and Fisheries, after consultation with the Wheat Commission, has made the Wheat (Ascertained Average Price) Order, 1938 (Statutory Rules and Orders, 1938, No. 795). This Order certifies and prescribes that during the cereal year ended July 31st, 1938, registered wheat growers sold 24,550,000 cwt. of millable wheat of their own growing, at an average price of 8s. 4.394d. per cwt. (37s. 7.773d. per quarter). As total certified sales were less than the anticipated supply for the year, each grower will receive the full deficiency payment for every hundredweight of wheat in respect of which he has delivered a valid claim to the Wheat Commission, less a deduction for administrative expenses, which has been fixed at 0.606d. per cwt. (2.727d. per quarter).

The certified quantity of 24,550,000 cwt. of millable wheat includes 100,000 cwt. on which deficiency payments under the Wheat Act will not be payable because the growers of the wheat have elected to receive the oats or barley subsidy payable under the Agriculture Act, 1937.

The net rate of deficiency payments for the year amounts to 1s. 7d. per cwt. (7s. 1½d. per quarter), so that the average amount per quarter received by growers for all wheat certified, including the 100,000 cwt. disqualified for deficiency payments, is 44s. 8.927d. The Commission hoped to make final payments about September 9th.

THE WHEAT COMMISSION PAY 1/7d. PER CWT. TO WHEAT GROWERS FOR 1937-38.

The Wheat Commission are now preparing the final payments due to wheat growers, under the Wheat Act, for the sixth cereal year, which ended on the 31st July. Growers who delivered valid wheat certificates to the Commission by 26th May, 1938, have already received an advance payment at the rate of

8d. per cwt. The final payment will be a payment of the balance in the case of these growers, but the full amount for the year will be paid in the case of those growers who have not been paid an advance on account.

As a preliminary step, the Minister of Agriculture and Fisheries has made an Order, on the advice of the Wheat Commission, prescribing two figures on which the calculation of the payments to growers has to be based. By this Order the Minister has prescribed 8s. 4.394d. per cwt. as the "ascertained average price" of home-grown millable wheat, at farm, obtained by registered growers in 1937-38. The Order also certifies that the quantity of home-grown millable wheat (of their own growing) sold by registered growers in 1937-38 was 24,550,000 cwts. This quantity includes 100,000 cwts. on which deficiency payments under the Wheat Act will not be payable because the growers of the wheat have elected to receive the oats or barley subsidy payable under the Agriculture Act, 1937.

The Wheat Act specifies 10s. per cwt. as the "standard price." For 1937-38 a registered grower will be entitled to receive from the Wheat Commission for each cwt. of millable wheat of his own growing sold by him and not disqualified under the Agriculture Act, a "deficiency payment" representing the difference between the "ascertained average price" and the "standard price", less a deduction to defray the cost of administration. The difference between the ascertained average price of 8s. 4.394d. per cwt. and the standard price of 10s. is 1s. 7.606d. per cwt. From the latter figure the Commission have decided to deduct 0.606d. in respect of each cwt. eligible for deficiency payment, to meet administrative expenses for 1937-38. Therefore the deficiency payment for 1937-38 will be 1s. 7d. per cwt.

It is to be noted that the average amount received by registered growers as a whole by way of market price plus deficiency payment in respect of each cwt. of millable wheat certified as sold will be 9s. 11.317d. for the cereal year 1937-38. This compares with a corresponding figure of 9s. 11.45d. per cwt., for the cereal year 1936-37.

The comparative figures for the last three cereal years are:—

	1937-38	1936-37	1935-36
	s. d.	s. d.	s. d.
1. Ascertained average price per cwt. ...	8 4.394 cwts.	8 9.92 cwts.	5 9.231 cwts.
2. Millable wheat certified as sold ...	24,550,000	23,700,000	33,650,000
	s. d.	s. d.	s. d.
3. Administrative expenses per cwt. ...	0.606	0.55	0.476
4. Wheat Commission's payment to growers per cwt. ...	1 7	1 1.53	3 4.26
5. Average amount per cwt. (market price plus deficiency payment) received by growers	9 11.317	9 11.45	9 1.491

The Wheat Commission hoped to be able to send out the cheques for final payments about the 9th September. It will be understood that those registered growers who have already received an advance on account for any wheat at the rate of 8d. per cwt., will be paid only the balance of 11d. per cwt. in respect of that wheat.

MILK AND MILK PRODUCTS ACTS (NORTHERN IRELAND) 1934-38.

Determination of the Joint Milk Council.

The Council, after several meetings held to consider milk prices for the year 1938-39, have decided to increase the distributive margin by $\frac{1}{2}$ d. per gallon during the forthcoming contract period. After careful consideration they also decided they would not be justified in granting the farmers' demand for an increase, and they, therefore, decided that producers' prices should remain the same as last year. In respect of the margin allowed to distributors the Council agreed that in the light of the audited accounts which were submitted, and the general increase in the price of petrol and other materials which occurred during the past year, some increase in the distributive margin was necessary. On their failure to reach an agreement as to how this increase was to be met the "appointed members" decided that an increase of $\frac{1}{2}$ d. per gallon would be the fairest sum to award. This increase is to be met by continuing the existing winter prices for an additional three months and shortening the summer period to the months of June and July. This increase in retail prices will apply only to Belfast and district, and to Londonderry, and there will be no increase in retail prices in other parts of the country where producers normally distribute their own milk, and the cost of retailing is, therefore, lower than in Belfast and district where milk has to be conveyed a long distance and sold through the distributive trade.

The following changes in prices will have effect for the periods mentioned :

Belfast District and County Borough of Londonderry	Prices of Grades A, B and C raised by 2d. per gallon from the 1st October, 1938, to the 31st May, 1939.
Coleraine Borough and Certain Urban Districts	Prices of Grades A, B and C raised by 2d. per gallon from the 1st October, 1938, to the 30th April, 1939.
Seaside Areas ...	Prices of Grades A, B and C unchanged for period 1st October, 1938, to 30th September, 1939.
All other areas	Prices of Grades A, B and C raised by 2d. per gallon for period 1st October, 1938, to the 30th April, 1939.

The full price determination will be published in next month's report.

AGRICULTURAL NOTES.

SEASONAL FARM NOTES.

THE LAND FERTILITY SCHEME.—Farmers are reminded that this scheme is still in operation, the conditions and rates of subsidy being the same as last year, namely :—For lime, half the approved cost of the lime and half the cost of the transport to the farm; and for British basic slag, one quarter the cost of the slag, plus one quarter the cost of the transport to the farm. Orders for lime or slag should be placed with approved suppliers as early as possible, otherwise disappointment may be experienced. Lists giving the names and addresses of approved suppliers may be seen at any Royal Ulster Constabulary Barracks, or at the offices of the County Committee of Agriculture.

GRAIN CROPS.—If, on account of weather conditions, difficulty is experienced in having stooked crops of oats and barley in a fit condition for stacking, the sheaves should be put into huts and not allowed to remain in stooks for a long period. Hutting can be done when the sheaves are not in a fit condition for stacking, and both grain and straw will be “safe” in huts for a considerable length of time. Further, the huts can be carted for stacking during weather that would preclude doing so from stooks.

A good “bottom” of bushes on which to build the corn stacks should be provided so as to prevent the lower layers of corn from being damaged while in stack. A better plan is to build the stacks on stands which should be about $2\frac{1}{2}$ feet high and may be made from strong scantlings laid on posts driven into the ground, and covered with bushes or straw. Such stands will prevent rats and mice from gaining access to the stacks. The stacks should be well thatched as soon as possible after being built, to prevent damage by rain. Thatching should only be done when the stacks are dry.

HAY.—Ricks of hay still remaining in the fields should be carted and stacked as soon as possible. If the ricks are left out in the fields serious damage will be caused to the hay on the outsides and at the bottoms of the ricks.

POTATOES.—The lifting and storing of crops of second early varieties of potatoes should be completed as soon as possible. It is strongly recommended that the chats and diseased potatoes be separated from the saleable produce when lifting is being done. This permits making use of tubers which are diseased, but not too far gone for cooking and feeding, and it also prevents the spread of disease from the diseased to healthy tubers in the pits or houses. If storing in pits, the potatoes should be well covered with dry straw before the soil is placed on the clamp, and only sufficient earth to keep the thatch in place should be put on until the potatoes have had time to dry thoroughly and any sweating to have ceased. The pits can be fully earthed later, but this should be done before heavy frosts are likely to appear.

Rushes should never be used for thatching potato pits, as this practice will act as a means of spreading their seed and ultimately may lead to the appearance of these weeds in the field. Potato stalks also should not be used for covering potatoes, even for a short time, as they are invariably affected with blight disease, and if brought into contact with the potatoes will transmit the disease to them.

The seed for next season's planting may be selected and put into sprouting boxes at lifting time. The boxes should be placed in a dry well-lighted shed or loft.

MANGELS.—Mangels are very liable to injury by frost, and should be lifted and stored before frosts are likely to appear. The clamp should be made convenient to a roadway, and covered with a thick layer of old dry grass or other suitable covering.

LEA GROUND.—Lea ground for ploughing should be grazed down as closely as possible, and all coarse clumps of grass cut off. This is a particularly valuable practice where an attack by leather jacket grubs is feared, as the eggs giving rise to these grubs are laid on tufts of old grass in late summer.

PASTURE.—The cutting of "shot" grasses and of clumps of rough grass on pasture fields during the late summer is a practice which should be more generally adopted than at present. It encourages the production of fresh growth, keeps the pasture in good condition, and aids in discouraging the formation of a "mat" on the surface. This work can be done with the ordinary mowing machine having the cutting bar set high, and if not already done should be carried out immediately in the case of fields carrying tufts of old grass which have not been grazed closely by stock. Pastures so treated will benefit considerably from this treatment, which is an essential if the fields are to be dressed with lime or phosphates this autumn. A run of the chain harrow over pastures during the autumn, to spread the animals' droppings and thus to ensure more even growth of grass next season, is also a sound practice.

WINTER WHEAT.—Winter wheat should be sown as soon as possible when the ground is in a fit condition in order to give the wheat a good start in growth before severe weather sets in. The earlier the seed is sown the better is the braird and the likelihood of a good crop. Varieties such as Queen Wilhelmina and Squarehead's Master, have given good results in most parts of Northern Ireland. If a variety other than these is under consideration for sowing, the Agricultural Instructor for the district should be consulted as to the likelihood of its being suitable for the locality and soil conditions. The usual rate of seeding is from 14 to 16 stones per acre. In order to prevent attacks of smut and other seed-borne diseases the seed should be dressed

before sowing with a preparation manufactured for the purpose, for example "Ceresan" or "Agrosan G." The manufacturers' instructions regarding the application of such preparations should be read carefully and adhered to.

SEASONAL LIVESTOCK NOTES.

SHEEP.—Sheep require special attention at this time of year, when the breeding flock should be selected and mated with the best quality ram procurable. Farmers are reminded that a premium system for Border Leicester rams is in operation in all counties, and use should be made of these rams if at all possible. The animals are of superior quality, and the service fee is small. The County Committees of Agriculture also give monetary assistance to Black Face sheep breeders to purchase high-grade rams for mating with their flocks. Information regarding these schemes can be obtained from The Secretary of the Committee of Agriculture for the County.

Ewes which have not good mouths and udders should not be included in the breeding flock, but specially marked for disposal. For the purpose of introducing fresh blood, facilities will be available for the admission into Northern Ireland of sheep from certain sales in Scotland. Particulars of these sales are given on pages 268 and 269.

RECOGNITION OF SERVICE DATES.—Before the ewes are mated the wool should be clipped from around their tails, those with long tails receiving special attention. The breast of the ram should be treated with keel or other colouring matter, so that the date of service may be noted. The keel should be mixed with lard or grease, which keeps it soft and effective for some weeks. Oil should not be used for this purpose, because it damages the wool and also causes the colouring mixture to harden, rendering it ineffective. The colour of the keel should be changed every three weeks so that it may be known whether or not ewes are returning to service, thus giving an opportunity of changing the ram should it be found necessary to do so.

FLUSHING OF EWES.—Care should be taken to ensure that ewes are not overfat at the time of mating. The best results are usually obtained when the ewes are in an improving condition, rather than too fat. It is, therefore, desirable that at mating time the ewes should be put on good pasture such as aftermath. Fences should be repaired and briars cut around such fields.

FEEDING OF RAM.—If a ram is running with a large number of ewes it is advisable to give him some additional feeding during the service period. A daily feed of 1 lb. of crushed oats will be suitable and usually adequate.

LIVER FLUKE.—Precautionary measures against attacks of liver fluke disease should now be taken, especially in the case of sheep running on low-lying, marshy pastures. Dosing with carbon-tetrachloride is an effective preventive when done in time. Full particulars of this disease, and of control measures, are given in Leaflet No. 24.

CATTLE.—Treatment of “Husk” or “Hoose”. This ailment is often responsible for heavy losses in cattle, and it is important to take all steps possible to prevent its appearance. It is usual for it to appear at this season of the year. In districts where the disease is liable to occur the precaution of housing the cattle at night and keeping them in until the dew is off the grass next day should be adopted. By following this practice the possibility of the animals getting infested with the parasite which causes the disease will be lessened, as these parasites are not usually found on the grass during the day time and, therefore, will not be taken by the beasts when grazing. The younger cattle, which are more prone to serious attacks of “hoose” than older beasts, should, especially, be grazed on fresh, clean pasture, and given a little hand-feeding to keep up their condition and tone. A mixture of equal parts of crushed oats, maize meal and decorticated earthnut cake, or of 2 parts crushed oats or maize meal and 1 part linseed cake, forms a good meal ration for young cattle. Fuller information on the control of “hoose” is given on Leaflet No. 80.

HOUSING.—Attention should be paid to the work of renovating houses for store cattle. If the cattle are kept in dark, close houses during the winter they will get a “set-back” when turned out in spring. Simple but effective windows to provide light and ventilation can be put in with little expense, but with great benefit to the cattle. A “leaky” roof can do much damage to cattle, especially those tied up in stalls, and should be repaired before the cattle are put into the house.

FEEDING MILK COWS.—The feeding value of grass diminishes rapidly at this time of year and, accordingly, the ration of meals must be altered to make it richer in protein, and the quantity fed increased. Suitable meal mixtures for feeding to dairy cows are given in Leaflet No. 16. Cabbages will be found very useful in maintaining milk yields and giving “colour” to the milk after the cows are brought in at night.

PIGS.—Chats, and tubers which are sunburned or slightly diseased, should be cooked and fed to pigs. Potatoes are rich in carbohydrates, and the quantity fed should not exceed 12 lb. per pig per day. The quantity of milk or milk substitutes in the ration should be increased if potatoes are used. Particulars of suitable meal mixtures to be fed along with potatoes are given in Leaflet No. 35.

SEASONAL GARDEN AND ORCHARD NOTES.

CABBAGE PLANTING.—Plants raised from seed sown in July should now be ready for planting out. Planting should be completed if possible before the end of September. The soil should be firm but not over rich. Ground from which early potatoes have been taken is usually suitable for cabbage without the addition of any further manure.

CAULIFLOWERS.—Cauliflower plants raised from seed sown last month should now be transplanted in frames for overwintering. The lights need not be placed in position until later, but the plants should be protected if there is a danger of frost. During the winter the frames should be freely ventilated on all favourable occasions, and all tendency to coddling should be avoided as the harder the plants are grown the better the crop will be.

CELERY.—Maincrop celery should now be ready for earthing-up. This work should be done on three or four occasions when the plants are dry and the soil moderately so. Too much soil should not be placed around the plants at any one time, and care must be taken to ensure that none of the soil gets into the centre of the plants. Before the first earthing-up is done all off-sets or side growths should be removed. A period of from 14 to 21 days should elapse between each two earthings-up. The spraying of the plants about every 14 days with Burgundy mixture (1 lb. bluestone, $1\frac{1}{2}$ lb. washing soda, 10 gallons water) to protect them against celery blight should be continued.

WINTER LETTUCE.—Lettuce plants raised from seed sown in August should now be ready for transplanting. A second transplanting should be made about a fortnight after the first. Where glass-houses are available these can be turned to profitable account by growing winter lettuce. If seeds of a suitable variety, such as Cheshunt Early Giant, are sown in early October in shallow boxes of soil, and the seedlings pricked out early, it should be possible to have plants fit for cutting shortly after Christmas.

PICKING AND STORING APPLES.—Preparations should be made for the picking and storing of late varieties of apples. Ladders, picking bags and buckets should be put in good repair and the store houses should be cleaned and all dust and debris removed. The walls of the store should be given a coat of whitewash, and any woodwork should be scrubbed with a strong solution of washing soda. A final washing down with a solution of bluestone (2 lb. in 10 gallons water) may be given. This solution not only helps to preserve the wood, but reduces the risk of fungus diseases spreading amongst the fruit while it is in the store. The storage cases should also be treated with the solution after they have been repaired where necessary.

During picking, the greatest care should be taken to avoid bruising the fruit. All receptacles into which the apples are picked from the trees should either be of soft material or be lined with some soft material. Before being stored the sound, unblemished apples should be divided into two or three grades according to size. Badly diseased and unsound fruit should not be brought into the store. The fruit should be dry when placed in the store, and the filled storage cases can, with advantage, be stacked in the open for a couple of weeks before being placed in the store, during which time they

should be protected from rain. When the cases have been placed in the store the store should be well ventilated for some time to allow any moisture given off by the fruit to escape.

FLOWERS.—Chrysanthemum plants grown in pots out-of-doors during the summer should be placed under glass not later than the first week of October. Ample ventilation should be given.

BEES.—Owing to the unfavourable weather during the past season, stocks of bees may be short of food for the winter. Stocks which are now short of supplies should be fed with syrup made by dissolving 5 lb. best quality white sugar in 2 pints of water. Feeding may continue until the end of September.

SEASONAL POULTRY-KEEPING NOTES.

CULLING OF PULLETS.—The pullets have now reached the stage when an opinion can be formed as to their suitability for inclusion in the laying flock. Some inferior birds will be found in most flocks, and a policy of rigorous culling should be pursued. Birds which are undersized and apparently “weakly” or deformed in any way should be taken out and disposed of. These will not give an economic return for the attention they receive, and being more susceptible to disease may act later as “reservoirs” of diseases, spreading infection to the healthy birds. Birds which commence to lay at a very young age are usually small-bodied and lay small eggs. Such birds should be specially marked for disposal after the first laying season, and not used for breeding purposes later. The best layers in a flock are usually those which commence to lay some time after those which start first, but before those which are the last in the flock to begin laying. Leaflet No. 29 contains useful hints on the culling of pullets, and should be read by those not familiar with such work. The Poultry Instructor for the district is also available for giving demonstrations of the art of culling pullets.

FEEDING OF PULLETS.—The pullets should now be in their laying quarters and be receiving moderately good feeding to encourage egg production. A very good feed for bringing slowly maturing pullets into lay is a mash made up of ordinary cereals wet with separated milk. A mixture for use, along with separated milk, which has given good results is—

4	parts	by	weight	pollards	or	sharps.
2	„	„	„	bran.		
2	„	„	„	maize	meal.	
1	part	„	„	Sussex	ground	oats.

If separated milk is not available 1 part by weight white fish meal or of high-grade meat meal, or $1\frac{1}{2}$ parts by weight extracted soya bean meal, should be added to the above mixture. Where extracted soya bean meal is used as the

milk substitute, it is necessary to add a mineral mixture consisting of 2 parts by weight ground limestone and 1 part by weight common salt at the rate of 2 lb. to each cwt. of meal mixture. Leaflet No. 3 contains examples of suitable meal mixtures to use for egg production.

PROVISION OF SHELL-MAKING MATERIAL.—It should be realised that hens require a constant supply of shell-making material. Not only are thin-shelled eggs a loss but may encourage hens to eat eggs, causing a still greater loss. Suitable shell-forming material can be given in the form of oyster shell or of limestone grit.

WATER SUPPLY.—The need for a plentiful supply of clean water cannot be over-emphasised. An insufficient or irregular water supply will cause a serious decline in egg production, and may be responsible for a great reduction in the stamina of the birds. Where dry mash is fed there should be water convenient to the dry mash hopper.

SELECTION OF BREEDING STOCK.—Birds for the breeding flock should now be selected. The use of pullets for breeding is not recommended because little can be known of their stamina or ability to produce eggs. A careful selection should be made from year-old hens, discarding any which show any sign of deformity or of loss of vigour. Hens which commenced to lay very early as pullets should also be discarded.

Cockerels should also be selected now. Only birds of good size and of vigorous appearance should be considered. Small cockerels, if used for breeding, will usually produce small, weakly chickens, which are difficult to rear and never reach a suitable size. Large sized hens are, however, of even greater importance than large sized males in the building up of a strain of large-sized birds, as good size in the offspring is inherited to a greater extent from the hen than from the sire.

MANAGEMENT OF BIRDS SELECTED FOR BREEDING.—Hens selected for the breeding pen should be moved to new quarters. This will encourage a moult in any birds that have not already moulted, thus giving them a rest before starting to produce eggs for hatching. A grain food consisting of oats or a mixture of oats and wheat given in two daily feeds would be sufficient food for these hens at present. Care should be taken that each feed is cleaned up before the next feed is due to be given. If possible, the breeding pen should be allowed to roam over stubble ground. In such circumstances the grain feed should be reduced or even omitted altogether if there is good feeding on the stubbles, and a daily feed of mash composed chiefly of bran should be given. Useful hints on the feeding and management of the breeding flock are given in Leaflet No. 83.

If eggs for hatching are required in October it will be necessary to put the breeding pen into their permanent quarters at once and to feed the birds on a laying mash, such as that advised for laying pullets, so as to get them into production as soon as possible. If limited supplies of milk are available it should be reserved for the breeders instead of the pullets, as milk is a very useful food not only for encouraging laying but also for ensuring good hatchability of the eggs.

TURKEYS.—Turkeys will benefit from a range over stubbles. If much grain has been left on the ground the amount of feed should be reduced for some time and then gradually increased.

ANNOUNCEMENTS AND REMINDERS.

IMPORTATION OF SHEEP INTO NORTHERN IRELAND FROM SCOTLAND.

The Ministry of Agriculture for Northern Ireland announces that, provided no unforeseen circumstances arise, it will be prepared to admit breeding sheep from the following sales to be held in Scotland during September and October, subject to the salemasters conducting the sales complying with certain conditions laid down by the Ministry.

An officer of the Ministry will be in attendance for the purpose of issuing permits for the importation into Northern Ireland of animals purchased, and before making any purchases persons from Northern Ireland should get into touch with him in the saleyard.

These facilities are intended only for breeders who wish to retain the animals purchased at the sales for breeding purposes. All animals imported must be moved directly from the Northern Ireland port of landing to the farms to which they are licensed, where they are to be isolated and detained for a period of not less than 14 days.

It should be understood that these arrangements may be either modified or cancelled at any time if, in the opinion of the Ministry, the disease position in Great Britain should warrant the adoption of either course.

Persons interested should, if possible, communicate with the Ministry before going to the sales.

1. Lawrie & Symington, Lanark.

27th & 28th September	Blackface Ewes, Leicester and Down Rams, and Blackface Gimmers.
11th October	... Blackface and Cheviot Ewes and Gimmers, and Border Leicester and Down Rams.
14th October	... Blackface Rams and Lamb Rams.

2. J. Craig, Ltd, Ayr.

22nd & 23rd September	Blackface and Cheviot Hill Ewes and Lambs.
29th September	... (Ayr Ram Society's Show and Sale)—Border Leicester and Blackface Rams and Lambs.
30th September	... Blackface and Cheviot Hill Ewes.

3. Macdonald, Fraser & Co., Ltd., Perth.

5th October ... * Blackface and Cheviot Hill Sheep and Lambs.
12th October ... Blackface Rams and Ram Lambs, Leicester Rams and Ram Lambs.

4. Live-Stock Marts, Ltd., Stirling.

7th October ... Blackface Shearling Rams and Ram Lambs.
11th October ... Uncrossed Blackface Ewes.
18th October ... Uncrossed Blackface Ewes.

GENERAL.

WINTER AGRICULTURAL CLASSES.—The following centres have been provisionally selected by the County Committees of Agriculture for Winter Agricultural classes commencing next November :—

County Antrim—Portglenone, Ballymoney, Straid and Lylehill.

County Armagh—Ahorey and Breagh.

County Down—Mayobridge, Castlewellan, Ballyhalbert and Legacurry.

County Fermanagh—Derrylin and Irvinestown.

County Londonderry—Maghera and Ringsend (Garvagh).

County Tyrone—Brackey, Eskra, Strabane or Plumbridge, Drumquin, Altmore and Caledon.

Particulars regarding the duration of these classes, along with a syllabus showing the subjects dealt with, are given in Leaflet No. 60. As only a limited number of pupils can be admitted to each class those desirous of attending should make immediate application to the Secretary or Agricultural Organiser of the County Committee of Agriculture, or to the Agricultural Instructor.

TRAINING FOR GIRLS.—The next session at the Ulster Dairy School, Cookstown, and at the North West School, Strabane, begins on the 11th October.

GREENMOUNT COLLEGE.—The next session at Greenmount Agricultural and Horticultural College begins on the 11th October.

AUTUMN SHEEP DIPPING.—The autumn sheep dipping period extends this year from 10th October to 12th November. During this period all sheep must be dipped twice, allowing an interval of not less than seven or more than fourteen days between the two dippings.

COUNTY POULTRY STATIONS.—Those desirous of being considered for hen, goose and turkey stations for the coming season should make application at once to the Secretary of the County Committee of Agriculture, or to the local Poultry Instructor, as the selection of persons to keep such stations will be made in the near future by the various County Committees of Agriculture.

LECTURES AND CLASSES.—Arrangements are now being made by County Committees of Agriculture regarding programmes of lectures to be given during the coming winter by the Instructors employed by the Committees. Requests for lectures to be given at particular centres should be sent to the

Secretary of the County Committee of Agriculture for the County, as should requests for poultry-keeping classes to be given by the County Poultry Instructors.

LAND FERTILITY SCHEME.—Farmers intending to take advantage of the Scheme during the coming months should make early application to approved suppliers for the lime and British basic slag which they require.

MANURING OF PASTURES.—The application of a phosphatic manure, such as basic slag, gafsa rock phosphate or Semsol, to pasture in poor condition is an essential in any programme of pasture improvement. Any of these manures can be applied from October onwards, and it is an advantage to get the manure on the land as early in the autumn as possible. If it is intended to apply both lime and phosphate to grass land the best procedure, especially if gafsa rock phosphate is being used, is to apply the phosphate this autumn and the lime the following autumn. The best sources of phosphate to use on grass which has been limed recently are basic slag and Semsol.

LEAFLETS.—Copies of the leaflets issued by the Ministry are obtainable free on request.

NAMES AND ADDRESSES OF SECRETARIES AND AGRICULTURAL ORGANISERS OF COUNTY COMMITTEES OF AGRICULTURE.

County.	Name and Address of Secretary or Organiser.
Antrim	A. B. Clarke, B.A. (Secretary), Courthouse, Crumlin Road, Belfast.
Armagh	S. Jordan, B.Agr. (Organiser), Russell Street, Armagh.
Down	J. L. M'Whinney, B.Sc., A.R.C.Sc.I. (Organiser), Northern Bank Chambers, May Street, Belfast.
Fermanagh ..	W. T. M'Clintock, B.Agr. (Organiser), Courthouse, Enniskillen.
Londonderry ..	T. K. Caldwell (Secretary), Courthouse, Coleraine.
Tyrone	W. Walsh (Secretary), Courthouse, Omagh.

BROADCASTING.—The following arrangements regarding talks and discussions on subjects of interest to farmers, to be broadcast from the Northern Ireland Station of the British Broadcasting Corporation, have been made:—

Date.	Subject.	Speaker.
3rd October ..	Pig Breeding and Management	J. Morrison, B.Sc., N.D.A., Agric. Research Institute, Hillsborough.
17th October ..	Discussion—Mechanisation and its application to small farms.	
31st October ..	Pastures in Winter.	Professor S. P. Mercer, Dean of the Faculty of Agriculture, Queen's University, Belfast.

MILK PROSECUTION.

A case of considerable importance to milk producers regarding contracts with distributors was heard recently at Belfast Petty Sessions. A Grade B producer, who held both producer's and distributor's licences, was prosecuted on the grounds that, as the holder of a producer's licence, he sold milk in quantities of two or more gallons daily to certain distributors otherwise than on conditions which were in accordance with a determination of the Joint Milk Council, namely under a contract in writing registered with the Council, in contravention of the provisions of section 6(6) of the Milk and Milk Products Act (Northern Ireland), 1934. It was contended by Counsel on behalf of the defendant that as the holder of a distributor's licence defendant was not bound by the determination of the Council whereby sales of two gallons or more per day should be by contract in writing. The Court was unable to accept Counsel's contention, and in a written judgment held that the fact of defendant being also a holder of a distributor's licence did not in any degree absolve him from complying with the regulations devolving upon him as the holder of a producer's licence. Defendant was convicted on all the summonses and substantial penalties imposed.

SIXTEENTH EGG LAYING TEST AT STORMONT.

FINAL RESULTS.

The twelfth and last four-weekly period of the test ended on 1st September. In the following pages are given some preliminary particulars of results. A detailed report on the test will be published in due course.

The total number of birds originally penned was 708, and the average total production, making no allowance for deaths, was 172.3 eggs per hen. The average production of scoring eggs, i.e., eggs weighing 2 oz. and over, was 142.8 per hen. For the previous test these figures were 184.2 and 161.5, respectively.

Of all the eggs produced 82.9 per cent. were 2 oz. or over in weight as compared with 87.6 per cent. during the previous test.

During the final period 17 birds died, bringing the total number of deaths up to 116. This represents a mortality rate of 16.38 per cent. as compared with 10.4 per cent. in the previous test.

The following table gives particulars of the average total production, average production of scoring eggs, the percentage of scoring eggs and mortality rate in respect of the birds in each Section of the Test.

Section.	No. of birds originally penned.	Average total egg production.	Average Production of scoring eggs.	Percentage of scoring eggs.	Percentage mortality
1. White Wyandottes ..	132	177.0	151.6	85.7	17.43
2. White Leghorns ..	54	171.3	144.2	84.1	22.22
3. Rhode Island Reds ..	156	173.7	143.3	82.5	14.09
4. Any other pure breed ..	90	160.5	127.2	79.3	13.33
5(a) Station holders—					
White Wyandottes ..	54	173.5	142.9	86.7	5.55
5(b) Station holders					
White Leghorns ..	42	167.9	150.3	89.5	28.57
5(c) Station holders—					
Rhode Island Reds ..	108	174.8	145.2	83.7	17.59
6. Poultry Clubs and Young Farmers' Clubs ..	72	173.7	135.9	79.2	16.66
TOTAL ..	708	172.3	142.8	82.9	16.38

The White Wyandottes in Section 1 had the highest average total egg production, with an average of 177.0 eggs per hen. These birds had also the highest average production of scoring eggs, namely 151.6 per hen.

The Rhode Island Reds in Section 5(c) are second in average total egg production with an average of 174.8 eggs per hen.

The Club entries, Section 6, and the Rhode Island Reds in Section 3 are third, and are closely followed by the White Wyandottes in Section 5(a).

It may be of interest to note that of the twelve pens in Section 6, nine were Rhode Island Reds and three were White Wyandottes.

The average total egg production in this test was markedly lower than in the previous test. There has also been a decline in the proportion of scoring eggs.

The mortality rate among the birds is decidedly higher than in the previous test, being 16.38 per cent. for all birds in the test this year as compared with 10.4 per cent. last year. All Sections except Section 5(a) and Section 6 show an increase in mortality rate as compared with last year's test. In Section 1 the deaths were well distributed among the various pens, only 2 pens having more than 2 deaths. In Section 2 every pen lost one or more birds, but no

pen had more than two deaths. In Section 3 only 1 pen had more than two deaths. Section 4, which contained chiefly pens of the Light Sussex breed, had a higher mortality than in the previous test, but in Section 5(a) White Wyandottes (Station Holders), there was a very low mortality rate.

The White Leghorns, both in Section 2 and Section 5(b), had a very high rate of mortality.

In Section 6 the mortality rate, while lower than in the previous test, was nevertheless high.

The following are particulars of the leading pens in the various Sections:—

SECTION 1. WHITE WYANDOTTES (Open). 22 pens.

Position.	No. of pen.	Name and Address of Owner.	No. of eggs laid during 48 weeks.				* Score Value
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	4	Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh.	485	629	90	3	1114
2	10	Mrs. J. R. Jackson, Fortview, Coleraine, Co. Londonderry.	323	788	167	5	1111
3	9	Greenmount Agric. & Hort. College, Muckamore, Co. Antrim.	202	884	202	4	1086
4	14	Mr. Jas. Lenaghan, Tyconnett, Ballynahinch, Co. Down.	416	654	155	6	1070
5	7	Lt.-Col. J. P. Galbraith, Clanabogan, Omagh, Co. Tyrone.	539	506	47	1	1045

SECTION 2. WHITE LEGHORNS (Open). 9 pens.

1	29	Mr. J. Stevenson, Maze View, Corcreevy, Hillsborough, Co. Down.	540	632	121	9	1172
2	31	Mr. J. O. Turkington, Derryinver, Lurgan, Co. Armagh.	808	312	13	1	1120
3	26	Mr. T. J. M'Millan, Crossgar, Co. Down.	572	372	28	—	944

*Score value means the total of Super grade and First grade eggs.

SECTION 3. RHODE ISLAND REDS (open). 26 pens.

Position.	No. of pen.	Name and Address of Owner.	No. of eggs laid during 48 weeks.				Score Value
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	49	Mrs. J. M'Neill, Drain's Bay, Larne, Co. Antrim.	563	698	46	—	1261
2	39	Mrs. Hamilton Farr, Elsneuk, Dundrum Road, Newcastle, Co. Down.	768	459	34	1	1227
3	57	Mr. H. Ramsey, Loughview, Gilnahirk, Belfast.	512	619	132	—	1131
4	43	Miss E. E. Kennedy, Tullyreagh, Glarryford, Co. Antrim.	642	486	23	—	1128
5	58	Mrs. J. Telford, Drumarkin, Rathfriland, Co. Down.	347	647	61	1	994

SECTION 4. ANY OTHER PURE BREED. 15 pens.

1	67	Mr. R. Holmes, Moneycarrie, Killykegan, Coleraine, Co. Derry. (Buff Rock)	856	407	16	1	1263
2	68	Mr. R. Holmes, Moneycarrie, Killykegan, Coleraine, Co. Derry. (Buff Rock)	660	431	106	3	1091
3	73	Mrs. J. W. Murland, Ardnabannon, Annsboro', Co. Down. (Light Sussex)	745	270	18	1	1015
4	62	Mrs. M. Benson, Killymoon, Cookstown, Co. Tyrone. (Light Sussex)	328	642	53	4	970

SECTION 5(a) STATION-HOLDERS. WHITE WYANDOTTES. 9 pens.

1	81	Miss A. Peel, Aghadalgan, Roses Lane Ends, Belfast.	623	425	82	2	1048
2	76	Miss A. Brown, Ballyhill, Crumlin, Co. Antrim.	282	720	294	2	1002
3	83	Mrs. M. J. Veitch, Knockninny, Thompson's Bridge, Enniskillen.	543	357	59	1	900

SECTION 5(b) STATION-HOLDERS. WHITE LEGHORNS. 7 pens

Position.	No. of pen.	Name and Address of Owner.	No. of eggs laid during 48 weeks.				Score Value
			Super Grade	1st Grade	2nd Grade	Below 2nd Grade	
1	89	Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim.	683	597	34	1	1280
2	90	Mrs. J. Knox, Shanmullagh, Ederney, Co. Fermanagh.	348	647	86	—	995
3	91	Miss I. J. Magill, Mulloughdrin, Dromara, Co. Down.	714	182	108	4	896

SECTION 5(c) STATION-HOLDERS. RHODE ISLAND REDS. 18 pens.

1	102	Mrs. R. M'Giffert, Rathcunningham, Toye, Belfast.	633	583	50	—	1216
2	107	Mrs. J. O'Neill, Annesley Lodge, Coalisland, Co. Tyrone.	468	586	254	2	1054
3	93	Mrs. H. H. Dickson, Lower Coagh, Co. Tyrone.	518	508	38	2	1026
4	94	Miss S. M. Donaghy, Hilden, Ballymoney, Co. Antrim.	536	488	84	6	1024

SECTION 6. POULTRY CLUBS AND YOUNG FARMERS' CLUBS. 12 pens.

1	115	Ballywalter Young Farmers' Club, Co. Down. (White Wyandottes)	571	459	135	11	1030
2	116	Banbridge and District Poultry Club. (Rhode Island Reds)	309	706	124	10	1015
3	121	Garvagh Poultry Club. (Rhode Island Reds.)	517	347	162	58	864

SIXTEENTH EGG LAYING TEST. LIST OF AWARDS.

SECTION 1. WHITE WYANDOTTES.

Section Breed & Award	Pen No.	Name and Address of Owner.	No. of eggs laid by Pen.				
			Super Grade	1st Grade	2nd Grade	Under 2nd Grade	Score Value
1st (£7)	4	Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh.	485	629	90	3	1,114
2nd (£4)	10	Mrs. J. R. Jackson, Fortview, Coleraine, Co. Londonderry.	323	788	167	5	1,111
3rd (£2)	9	Greenmount Agricultural and Horticultural College, Muckamore.	202	884	202	4	1,086
4th (£1-10)	14	Mr. James Lenaghan, Tyconnett, Ballynahinch, Co. Down.	416	654	155	6	1,070

SECTION 2. WHITE LEGHORNS.

1st (£4)	29	Mr. J. Stevenson, Maze View, Corcreevy, Hillsborough, Co. Down.	540	632	121	9	1,172
2nd (£2)	31	Mr. J. O. Turkington, Derryinver, Lurgan, Co. Armagh.	807	313	13	1	1,120

SECTION 3. RHODE ISLAND REDS.

1st (£8)	49	Mrs. J. M'Neill, The Poultry Farm, Drain's Bay, Larne, Co. Antrim.	563	698	46	—	1,261
2nd (£6)	39	Mrs. Hamilton Farr, Dundrum Road, Newcastle, Co. Down.	768	459	34	1	1,227
3rd (£3)	57	Mr. H. Ramsey, Loughview, Gilnahirk, Belfast.	512	619	132	—	1,131
4th (£2)	43	Miss E. E. Kennedy, Tullyreagh, Glarryford, Co. Antrim.	642	486	23	—	1,128

SECTION 4. ANY OTHER PURE BREED.

1st (£6)	67	Mr. R. Holmes, Moneycarrie, Killykeegan, Coleraine, Co. Derry.	856	407	16	1	1,263
2nd (£3)	68	Mr. R. Holmes, Moneycarrie, Killykeegan, Coleraine, Co. Derry.	660	431	106	3	1,091
3rd (£2)	73	Mrs. J. W. Murland, Ardnabannon, Annsborough, Co. Down.	745	270	18	1	1,015

SECTION 5(a) STATION-HOLDERS. WHITE WYANDOTTES.

Section Breed & Award	Pen No.	Name and Address of Owner.	No. of eggs laid by Pen.				
			Super Grade	1st Grade	2nd Grade	Under 2nd Grade	Score Value
1st (£4)	81	Miss A. Peel, Aghadalong, Roses Lane Ends, Belfast.	623	425	82	2	1,048

SECTION 5(b) STATION-HOLDERS. WHITE LEGHORNS.

1st (£4)	89	Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim.	683	597	34	1	1,280
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SECTION 5(c) STATION-HOLDERS. RHODE ISLAND REDS.

1st (£7)	102	Mrs. R. M'Giffert, Rathcunningham, Toye, Belfast.	633	583	50	—	1,216
2nd (£4)	107	Mrs. James O'Neill, Annesley Lodge, Coalisland, Co. Tyrone.	468	586	254	2	1,054
3rd (£2)	93	Mrs. H. H. Dickson, Lower Coagh, Coagh, Co. Tyrone.	518	508	38	2	1,026
4th (£1-10)	94	Miss S. M. Donaghy, Hilden, Ballymoney, Co. Antrim.	536	488	84	6	1,024

SECTION 6. CLUB ENTRIES.

1st (£6)	115	Ballywalter Young Farmers' Club, Co. Down.	571	459	135	11	1,030
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CHAMPIONSHIP CUP.—The Silver Cup, offered by the Ministry in respect of the pen laying the greatest number of super-grade and first-grade eggs during the period of the test, was won by Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim (Pen No. 89; White Leghorns; 1,280 super-grade and first-grade eggs).

AWARDS FOR TYPE.—The three special awards of £2 each for pens of the best type of (1) White Wyandottes; (2) White Leghorns; and (3) Rhode Island Reds amongst those which qualified for first-class certificates, were won by the following :—

White Wyandottes—Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh. (Pen No. 4).

White Leghorns—Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim. (Pen No. 89.)

Rhode Island Reds—Mrs. R. M'Giffert, Rathcunningham, Toye, Belfast. (Pen No. 102.)

The award of £1 in respect of the pen of Light Sussex of the best type amongst the pens of that breed qualifying for first-class or second-class certificates was won by :—

Mrs. J. W. Murland, Ardnabannon, Annsborough, Co. Down. (Pen No. 73.)

WINTER PRODUCTION AWARD.—The award of £2 offered in respect of the pen laying the greatest number of super-grade and first-grade eggs during the first four periods (16 weeks) and subject to the other rules for awards was won by :—

Mrs. R. M'Giffert, Rathcunningham, Toye, Belfast. (Pen No. 102) Rhode Island Reds, 395 super-grade and first-grade eggs.

SCIENTIFIC POULTRY BREEDERS' ASSOCIATION CUP.—The Challenge Cup offered by the Council of the Association in respect of the pen laying the greatest number of super-grade and first-grade eggs during the winter period, that is, from the commencement of the test to the end of the sixteenth week, was also won by :—

Mrs. R. M'Giffert, Rathcunningham, Toye, Belfast.

THE FOUR SILVER MEDALS PROVIDED BY THE NORTHERN IRELAND UTILITY POULTRY SOCIETY for the best pens, as judged by egg production and subject to the rules of the Test, of (1) White Wyandottes; (2) White Leghorns; (3) Rhode Island Reds; and (4) any other pure breed of pullets, owned by members of the Society competing in the Test have been won by :—

(1) White Wyandottes : Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh. (Pen 4.)

(2) White Leghorns : No award.

(3) Rhode Island Reds : Mrs. J. M'Neill, Drain's Bay, Larne, Co. Antrim. (Pen 49.)

(4) Any other Breed : Mrs. J. Murland, Ardnabannon, Annsborough, Co. Down. (Pen 73.)

THE SILVER CUP, PROVIDED BY THE SOUTH TYRONE POULTRY KEEPERS' ASSOCIATION for the pen of best type amongst those pens entered by breeders from County Tyrone which qualified for first-class certificates, or second-class certificates in the case of birds of breeds other than White Wyandotte, White Leghorn, Rhode Island Red, Buff Rock and Black Leghorn, has been won by :—

Mrs. J. O'Neill, Annesley Lodge, Coalisland, Co. Tyrone. (Pen No. 107.) Rhode Island Reds.

MEDALS FOR SINGLE BIRDS.

Award	Qualifica- tion	Pullet No.	Pen No.	Owner and Breed	Eggs laid.				Score Value
					Super Grade	1st Grade	2nd Grade	Under 2nd Grade	
Silver Medal	Best pullet in Test	352	59	Mr. W. Topley, Hazel Bank Cottage, Bally- more, Tanderagee, Co. Armagh	62	221	11	1	283
Bronze Medal	Best pullet in Section 1	38	7	Lt.-Col. J. P. Galbraith, Clana- bogan, Omagh, Co. Tyrone	271	2	1	—	273
Bronze Medal	Best pullet in Section 2	138	23	Mr. W. D. Anderson, Ballyagherty, Saint- field, Co. Down	158	98	15	1	256
Bronze Medal	Best pullet in Section 4	397	67	Mr. R. Holmes, Moneycarrie, Killy- kergan, Coleraine, Co. Derry.	113	156	2	—	269
Bronze Medal	Best pullet in Section 5 (a)	481	81	Miss A. Peel, Agha- dalgan, Roses Lane Ends, Belfast	191	25	1	—	216
Bronze Medal	Best pullet in Section 5 (b)	534	89	Miss I. Gilmer, Rashee, Ballyclare, Co. Antrim	138	118	—	—	256
Bronze Medal	Best pullet in Section 5 (c)	560	94	Miss S. M. Donaghy, Hilden, Ballymoney, Co. Antrim	262	11	—	—	273
Bronze Medal	Best pullet in Section 6	666	111	Aghadowey Poultry Club, Co. Derry	228	14	—	—	242

The Champion Pullet referred to above, which won the Silver Medal, was in Section 3

SIXTEENTH EGG LAYING TEST AT STORMONT

LIST OF COPPER RINGS AND OF BRASS RINGS AWARDED.

Following are particulars of the birds which were awarded Copper or Brass rings. To be eligible for a Copper ring a hen must have laid at least 200 super-grade and first-grade eggs (2 oz. or over) during the period of the test; and to be eligible for a Brass ring a hen must have laid at least 180 super-grade and first-grade eggs. In addition, the birds must have passed the test for Bacillary White Diarrhoea disease and an inspection test by a poultry judge for type. Copper rings are awarded only to birds of White Wyandotte, White Leghorn, Rhode Island Red, Black Leghorn and Buff Rock breeds.

COPPER RINGS.

SECTION 1. WHITE WYANDOTTES.

Pen No.	Test No. of Bird	Name and Address of Owner.	Copper Ring No.
1	1	Mrs. K. Bamforth, Culmore House, Myrce, Co. Derry	U 1/38
	5	do. do. do. do.	U 2/38
2	10	Mrs. R. J. Beck, Cleigh, Corbet, Banbridge, Co. Down. ..	U 3/38
3	17	Mr. R. A. Copeland, Blackskull, Dromore, Co. Down. ..	U 4/38
	18	do. do. do. do.	U 5/38
4	21	Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh ..	U 6/38
	23	do. do. do. do.	U 7/38
5	28	do. do. do. do.	U 8/38
7	37	Lt. Col. J. P. Galbraith, Clanabogan, Omagh, Co. Tyrone. ..	U 9/38
	38	do. do. do. do.	U 10/38
	42	do. do. do. do.	U 11/38
8	44	Mrs. D. C. Gamble, Roan Lodge, Coalisland, Co. Tyrone ..	U 12/38
	46	do. do. do. do.	U 13/38
9	50	Greenmount Agricultural and Horticultural College, Muckamore, Co. Antrim. ..	U 14/38
	52	do. do. do. do. do. do.	U 15/38
10	55	Mrs. J. R. Jackson, Fortview, Coleraine, Co. Derry. ..	U 16/38
	57	do. do. do. do.	U 17/38
12	70	Miss E. E. Kennedy, Tullyreagh, Glarryford, Co. Antrim. ..	U 18/38
13	77	Mr. R. J. Laverty, Guinness, Ballynahinch, Co. Down. ..	U 19/38
	78	do. do. do. do.	U 20/38
14	79	Mr. James Lenaghan, Tyconnett, Ballynahinch, Co. Down. ..	U 21/38
	82	do. do. do. do. do.	U 22/38
	83	do. do. do. do. do.	U 23/38
15	85	Miss E. Little, Killyvolgan, Ballywalter, Co. Down. ..	U 24/38
	89	do. do. do. do.	U 25/38
17	100	Mrs. J. McNeill, Drain's Bay, Larne, Co. Antrim. ..	U 26/38
19	112	Mr. J. C. Stewart, Balloo, Killinchy, Co. Down ..	U 27/38
	114	do. do. do. do.	U 28/38
20	120	Mr. J. Stuart, High Street, Ballymena, Co. Antrim. ..	U 29/38

SECTION 2. WHITE LEGHORNS.

23	138	Mr. W. D. Anderson, Ballyaugherty, Saintfield, Co. Down. ..	U 30/38
25	146	Mrs. F. R. Brown, Lakeview, Enniskillen, Co. Fermanagh ..	U 31/38
	149	do. do. do. do.	U 32/38
26	151	Mr. T. J. McMillan, Crossgar, Co. Down. ..	U 33/38
	155	do. do. do. do.	U 34/38
28	166	Mrs. P. Rogan, Guinness, Dunmore, Ballynahinch, Co. Down ..	U 35/38
	168	do. do. do. do.	U 36/38
29	170	Mr. J. Stevenson, Maze View, Corcreeny, Hillsborough ..	U 38/38
	172	do. do. do. do.	U 39/38
	173	do. do. do. do.	U 40/38
31	181	Mr. J. O. Turkington, Derryinver, Lurgan, Co. Armagh. ..	U 41/38
	185	do. do. do. do.	U 42/38
	186	do. do. do. do.	U 43/38

SECTION 3. RHODE ISLAND REDS.

Pen No.	Test No. of Bird	Name and Address of Owner.	Copper Ring No.
34	202	Mr. J. Bailie, The Orangetree, Greyabbey, Co. Down. ..	U 44/38
38	223	Mr. R. A. Copeland, Blackskull, Dromore, Co. Down. ..	U 45/38
	224	do. do. do. do. ..	U 46/38
39	229	Mrs. Hamilton Farr, Elsneuk, Dundrum Road, Newcastle. ..	U 47/38
	230	do. do. do. do. ..	U 48/38
	232	do. do. do. do. ..	U 49/38
	234	do. do. do. do. ..	U 50/38
40	239	Mrs. H. Getty, Hillcrest, Newtownards, Co. Down. ..	U 51/38
42	247	Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh. ..	U 52/38
	248	do. do. do. do. ..	U 53/38
	250	do. do. do. do. ..	U 54/38
43	257	Miss E. E. Kennedy, Tullyreagh, Glarryford, Co. Antrim. ..	U 55/38
44	259	do. do. do. do. ..	U 56/38
	260	do. do. do. do. ..	U 57/38
	261	do. do. do. do. ..	U 58/38
45	266	Mrs. H. Getty, Hillcrest, Newtownards, Co. Down. ..	U 59/38
46	272	Mr. J. M'Cormick, Crosshill, Crumlin, Co. Antrim. ..	U 60/38
47	280	Miss S. E. M'Keever, Crobane House, Newry, Co. Down. ..	U 61/38
49	289	Mrs. J. M'Neill, Drains Bay, Larne, Co. Antrim. ..	U 62/38
	292	do. do. do. do. ..	U 63/38
	293	do. do. do. do. ..	U 64/38
52	308	Mrs. G. S. Parker, Lakeside, Tullyveery, Killyleagh, Co. Down. ..	U 65/38
	312	do. do. do. do. ..	U 66/38
53	315	Mrs. D. Patterson, Sunlea, Ballycastle Road, Coleraine. ..	U 67/38
58	345	Mrs. J. Telford, Drumarkin, Rathfriland, Co. Down. ..	U 68/38
59	352	Mr. W. Topley, Hazel Bank Cottage, Ballymore, Tandragee, Co. Armagh.	U 69/38

SECTION 4. ANY OTHER VARIETY.

67	397	Mr. R. Holmes, Moneycarrie, Killykergan, Coleraine, Co. Derry. ..	U 70/38
	398	do. do. do. do. do. ..	U 71/38
	400	do. do. do. do. do. ..	U 72/38
	402	do. do. do. do. do. ..	U 73/38
68	407	do. do. do. do. do. ..	U 74/38
(All Buff Rocks.)			

SECTION 5(a) (STATION-HOLDERS). WHITE WYANDOTTES.

76	451	Miss A. Brown, Ballyhill, Crumlin, Co. Antrim.	U 75/38
80	477	Mrs. W. K. M'Alister, Loughview House, Woodburn, Carrick-fergus, Co. Antrim.	U 76/38
81	481	Miss A. Peel, Aghadalgon, Roses Lane Ends, Belfast. ..	U 77/38
	484	do. do. do. do. ..	U 78/38
84	504	Mrs. J. Walsh, Backaderry, Leitrim, Banbridge, Co. Down. ..	U 79/38
85	509	Mrs. M. E. Warmington, Lakeview, Newtownhamilton, Co. Armagh.	U 80/38

SECTION 5(b) (STATION-HOLDERS). WHITE LEGHORNS.

Pen No.	Test No. of Bird	Name and Address of Owner.	Copper Ring No.
86	511	Mrs. J. Brown, Gorsebank, Culcrum, Cloughmills, Co. Antrim.	U 81/38
87	520	Mrs. W. Crawford, Redergan, Beragh, Co. Tyrone.	U 82/38
	521	do. do. do. do.	U 83/38
88	527	Mrs. E. Fulton, Kilnock House, Toomebridge, Co. Antrim.	U 84/38
89	531	Miss Iza Gilmer, Rashee, Ballyclare, Co. Antrim.	U 85/38
	532	do. do. do. do.	U 86/38
	533	do. do. do. do.	U 87/38
	534	do. do. do. do.	U 88/38
90	536	Mrs. J. Knox, Shanmullagh, Ederney, Co. Fermanagh.	U 89/38
91	543	Miss I. J. Magiil, Mullaghdrin, Dromara, Co. Down.	U 90/38

SECTION 5(c) (STATION-HOLDERS). RHODE ISLAND REDS.

93	553	Mrs. H. H. Dickson, Lower Coagh, Co. Tyrone. ..	U 91/38
94	560	Miss S. M. Donaghy, Hilden, Ballymoney, Co. Antrim.	U 92/38
	564	do. do. do. do.	U 93/38
95	567	Mrs. R. J. Dunn, Ballyskeagh, Artigarvin, Co. Tyrone.	U 94/38
	569	do. do. do. do.	U 95/38
96	574	Mrs. J. Gamble, Bridgehill, Castlederg, Co. Tyrone.	U 96/38
97	578	Mr. Martin Hook, Ballykeel, Dromore, Co. Down.	U 97/38
	581	do. do. do. do.	U 98/38
98	587	Mrs. W. MacCallum, Aldohil House, Newtownstewart, Co. Tyrone.	U 99/38
99	591	Miss E. M'Clelland, Ballynashee, Ballyclare, Co. Antrim.	U 100/38
	593	do. do. do. do.	U 101/38
101	601	Mrs. M. M'Cord, Gortnaquig, Coalisland, Co. Tyrone.	U 102/38
	603	do. do. do. do.	U 103/38
102	607	Mrs. R. M'Giffert, Rathcunningham, Toye, Belfast.	U 129/38
	608	do. do. do. do.	U 105/38
	609	do. do. do. do.	U 106/38
103	614	Mrs. J. A. M'Kee, Aughnagurgan, Lower Darkley, Keady, Co. Armagh.	U 107/38
	615	do. do. do. do. do. do.	U 108/38
104	620	Miss S. M'Kee, Ardmillan House, Killinchy, Co. Down.	U 109/38
	624	do. do. do. do.	U 110/38
107	637	Mrs. J. O'Neill, Annesley Lodge, Coalisland, Co. Tyrone	U 111/38
	639	do. do. do. do.	U 112/38
110	655	Mrs. J. W. Stewart, Boghill, Coleraine, Co. Derry.	U 113/38
	657	do. do. do. do.	U 130/38

SECTION 6. POULTRY CLUBS AND YOUNG FARMERS' CLUBS.

Pen No.	Test No. of Bird.	Name and Address of Owner.	Copper Ring No.
111	664	Aghadowey Poultry Club, Co. Derry. (Rhode Island Red) ..	U 115/38
	666	do. do. do. do. ..	U 116/38
113	676	Ballyclare Poultry Club, Co. Antrim. (White Wyandotte) ..	U 117/38
114	680	Ballywalter Young Farmers' Club, Co. Down. (Rhode Island Red.) ..	U 118/38
116	693	Banbridge and District Poultry Club, Co. Down. (Rhode Island Red.) ..	U 119/38
	695	do. do. do. do. do. ..	U 120/38
117	697	Crossgar Poultry Club Co. Down. (Rhode Island Red.) ..	U 121/38
	701	do. do. do. do. ..	U 122/38
118	707	Crumlin Poultry Club, Co. Antrim. (Rhode Island Red.) ..	U 123/38
119	710	Donaghadee Young Farmers' Club, Co. Down. (White Wyandotte.) ..	U 124/38
120	717	do. do. do. do. do. ..	U 125/38
	718	do. do. do. do. do. ..	U 126/38
121	723	Garvagh Poultry Club, Co. Derry. (Rhode Island Red.) ..	U 127/38
123	734	Portadown Poultry Club, Co. Armagh. (Rhode Island Red.) ..	U 128/38

BRASS RINGS.

SECTION 4. ANY OTHER VARIETY.

Pen No.	Test No. of Bird	Name and Address of Owner.	Brass Ring No.
61	362	Mrs. K. Bamforth, Culmore House, Myroe, Co. Derry. ..	U 211/38
62	367	Mrs. M. Benson, Killymoon, Cookstown, Co. Tyrone. ..	U 212/38
66	395	Greenmount Agricultural and Horticultural College, Muckamore	U 214/38
69	414	Miss M. A. Lawson, Roundhill House, Strabane, Co. Tyrone.	U 215/38
72	432	Mrs. J. W. Murland, Ardnabannon, Annsborough, Co. Down.	U 216/38
73	434	do. do. do. do. do. ..	U 217/38
	436	do. do. do. do. do. ..	U 218/38
74	442	do. do. do. do. do. ..	U 219/38
75	450	Mrs. S. B. Nangle, Ballyeglish, Moneymore, Co. Derry. .. (All Light Sussex.)	U 220/38

PRICES OF FEEDING STUFFS AT SPECIFIED CENTRES.

The following table shows the retail cash prices per cwt. of Feeding Stuffs at 1st September, 1938, in ten representative centres in Northern Ireland.

	Antrim	Armagh	Ballymena	Belfast	Castletown	Cole-raine	Dun-gannon	Ennis-killen	Omagh	Strabane
Protein Foods :	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed (whole) ..	—	16 0	16 9	16 0	20 0	19 0	— 6	16 6	— 6	—
Linseed Cake, home-made ..	—	13 0	12 0	12 0	—	12 0	13 6	11 0	12 6	—
Linseed Cake, foreign ..	11 6	12 0	11 0	11 0	11 6	11 6	11 6	9 6	11 0	10 9
Linseed Cake Meal ..	11 6	13 0	11 3	11 0	11 6	11 6	13 6	11 6	11 0	11 6
Cotton Cake, decorticated ..	9 0	—	9 3	10 6	9 9	9 6	—	10 0	10 0	10 0
Earthnut Cake, decorticated ..	9 0	—	9 0	9 0	—	9 0	—	9 6	9 6	9 6
Soya Bean Meal (extracted) ..	10 6	10 6	10 9	10 0	—	11 0	10 6	11 0	11 0	—
Fish Meal (60% protein) ..	17 0	16 6	16 6	16 6	—	16 6	16 6	16 9	16 6	16 6
Meat Meal (60% protein) ..	16 6	15 0	14 3	13 6	14 0	—	15 6	—	15 9	16 0
Meat and Bone Meal (40% protein) ..	—	10 6	—	9 6	—	11 0	10 0	—	—	11 0
Medium Protein Foods :										
Palm Kernel Cake ..	9 6	—	10 0	7 6	—	9 6	—	—	—	—
Palm Kernel Meal ..	9 6	9 6	10 0	7 6	—	9 6	—	—	—	—
Starchy Foods :										
Maize (whole) ..	6 10½	7 0	7 3	6 6	—	7 6	7 3	7 6	—	—
Maize Meal ..	7 4½	7 3	7 3	7 0	7 6	7 6	7 6	7 9	7 6	7 6
Maize Flaked ..	7 10½	8 0	7 9	7 6	7 9	8 0	8 0	8 0	8 6	8 6
Wheat (whole) ..	8 6	9 0	8 10½	10 0	8 3	10 6	8 6	10 0	9 6	—
Bran, Red ..	8 3	8 6	7 7½	8 6	—	8 6	8 0	9 6	8 6	8 6
Bran, White ..	9 9	9 6	9 3	10 0	9 9	10 0	10 0	10 9	10 6	10 3
Pollard, Brown ..	8 3	9 0	8 0	8 6	—	8 6	8 0	9 3	8 6	9 0
Pollard, White ..	—	10 0	8 9	10 0	9 9	9 0	10 0	10 3	10 0	10 0
Barley Meal ..	7 9	8 6	7 9	8 6	7 6	8 9	8 6	9 3	9 0	9 9
Tapioca Root Flour ..	7 6	—	8 0	—	—	—	8 6	—	—	9 6
Oats (whole) ..	9 6	9 0	9 0	9 6	7 6	9 4	10 0	10 0	9 0	8 9
Crushed Oats ..	10 0	9 0	9 6	10 6	7 9	9 10	10 6	10 8	9 6	9 9

NON-CONCENTRATES:—The average prices at representative markets at the beginning of September, 1938, were as follows:—Potatoes (New, Main Crop), 3/- per cwt.; Upland Hay, 58/- per ton; Oat Straw, 45/- per ton.

AVERAGE PRICES OF FEEDING STUFFS.

The following table shows the average retail cash prices per cwt. of feeding stuffs at 1st September, 1938, with comparative prices as at the 1st of the previous month; the costs per unit of protein equivalent and of starch equivalent are also given in respect of each month.

	Protein Equiv- alent	Starch Equiv- alent	Average price per cwt. at		Cost per unit of protein equivalent		Cost per unit of starch equivalent	
			1st Sept., 1938	1st Aug., 1938	Sept.,	Aug.,	Sept.,	Aug.,
Protein Foods			s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Linseed	19.0	119.0	17 5	17 2	18 4	18 1	2 11	2 11
Crushed linseed	19.0	119.0	18 0	18 6	18 11	19 6	3 0	3 1
Linseed cake								
(home-made)	25.0	72.0	12 3	12 3	9 10	9 10	3 5	3 5
Linseed cake								
(foreign)	25.0	72.0	11 2	11 3	8 11	9 0	3 1	3 2
Linseed cake meal	25.0	72.0	11 9	11 8	9 5	9 4	3 3	3 3
Decorticated								
Cotton cake	35.0	71.0	9 9	9 8	5 7	5 6	2 9	2 9
Decorticated								
Earthnut cake	41.0	73.0	9 3	9 2	4 6	4 6	2 6	2 6
Extracted Soya								
Bean Meal	38.0	64.0	10 8	10 7	5 7	5 7	3 4	3 4
Fish meal								
(60% protein)	53.0	59.0	16 7	16 10	6 3	6 4	5 7	5 8
Meat meal								
(60% protein)	55.0	61.0	15 1	15 0	5 6	5 6	4 11	4 11
Meat & Bone meal								
(40% protein)	36.0	44.0	10 5	10 7	5 9	5 11	4 9	4 10
Medium Protein Foods								
Palm kernel cake	17.0	75.0	9 2	9 2	10 9	10 9	2 5	2 5
Palm kernel meal	17.0	75.0	9 2	9 2	10 9	10 9	2 5	2 5
Starchy Foods								
Maize	6.8	81.0	7 2	7 4	21 1	21 7	1 9	1 10
Maize meal	6.8	81.0	7 5	7 8	21 10	22 7	1 10	1 11
Flaked maize	8.6	83.0	8 0	8 4	18 7	19 5	1 11	2 0
Wheat	9.6	72.0	9 3	9 9	19 3	20 4	2 7	2 9
Red bran	10.0	43.0	8 5	8 5	16 10	16 10	3 11	3 11
White bran	10.0	43.0	10 0	10 0	20 0	20 0	4 8	4 8
Brown pollard	11.0	60.0	8 7	8 9	15 7	15 11	2 10	2 11
White pollard	11.0	60.0	9 9	9 10	17 9	17 11	3 3	3 3
Barley meal	7.0	70.0	8 6	9 3	24 3	26 5	2 5	2 8
Oats	7.6	60.0	9 2	9 0	24 1	23 8	3 1	3 0
Crushed Oats	7.6	60.0	9 8	9 8	25 5	25 5	3 3	3 3
Tapioca root flour	1.0	83.5	8 5	8 6	168 4	170 0	2 0	2 0
Non-concentrates								
Potatoes	0.6	18.0	3 0	3 8½	100 0	123 7	3 4	4 1½
Upland hay	4.9	24.0	2 10½	3 3½	11 10	13 4	2 5	2 9
Oat straw	0.9	20.0	2 3	1 10½	50 0	41 8	2 3	1 10½

The object of the foregoing tables, besides providing information regarding the prices of feeding stuffs and the trend of prices, is to give purchasers a

guide as to the economic purchase of supplies. It should be understood that the price per ton is not a sound basis on which to judge whether or not a particular food or grade of a particular food is good value for money. The composition of the foods is the only basis on which different grades can be compared. The value of foods of different kinds, but of the same nature in reference to market prices, can also be compared on this basis.

In the case of an artificial manure which supplies only one fertilising ingredient as, for example, sulphate of ammonia, which supplies nitrogen, the cost of the unit of nitrogen at the price charged can be determined quite readily by dividing the price per ton by the percentage of nitrogen in the sample, and the figure thus obtained is the cost of a unit of nitrogen. By this method the most economical source of nitrogen can be ascertained. Similarly, in the cases of phosphatic and potassic manures.

With feeding stuffs, however, the same method cannot be applied to determine comparative values. This is because every feeding stuff contains three important food constituents in varying proportions. These are (1) carbohydrates, (2) oils or fats, and (3) proteins or albuminoids. The carbohydrates comprise a group of substances such as starch, sugar and cellulose. These substances supply heat or energy to the animal, and the surplus goes to form fat. They are the fuel which the animal requires to keep the body "fires" burning. The oils of a feeding stuff are also heat and energy suppliers, and the surplus is stored as fat. The oils are approximately $2\frac{1}{2}$ times more valuable than the carbohydrates as heat and energy producers, but excess in a ration may lower its digestibility and cause digestive troubles. The proteins are the most valuable and most expensive food constituent. They contain nitrogen and are the part of the food from which products which contain protein are chiefly made. Thus the protein products, such as lean meat, milk and eggs, are formed principally from protein, and young, growing animals, dairy cows and laying hens must have an adequate quantity of protein for full growth, development and production.

While all animals require a certain amount of carbohydrates, oils and proteins, the relative amounts depend on the class of stock. For example, a two-year-old fattening bullock requires much less protein than a dairy cow in milk and a fattening chicken less than a laying pullet.

There are wide differences in the composition of the different kinds of feeding stuffs. Some are rich in carbohydrates and, therefore, particularly valuable for fattening purposes. These include oats, maize, barley and wheat, and their products. Others are rich in protein and are valuable for producing flesh, milk and eggs. These include decorticated cotton cake, decorticated earthnut cake, meat meal and soya bean meal.

In the following table the composition of some of the commonly used feeding stuffs is shown—

	Water.	Protein.	Oil.	Carbohydrates.
Non concentrates				
Swede turnips ...	88	1	0.2	9
Potatoes ...	75	2	0.1	21
Cabbage ...	89	1.5	0.5	8
Oat Straw ...	14	4	2	37
Meadow hay ...	10	10	3	45
Pasture grass ...	80	3.5	0.8	10
Fattening Foods				
Crushed oats ...	13	9	6	60
Maize meal ...	12	10	4	70
Barley meal ...	13	12	2	66
Pollard ...	13	15	5	57
Flesh forming foods				
Decorticated Cotton cake ...	9	40	9	26
Decorticated Earthnut cake ...	10	46	7	23
Meat meal ...	11	60	6	—
Soya bean meal ...	11	44	1.5	32

The problem confronting the purchaser of feeding stuffs, who is concerned with the business of getting best value for money, is one which is much more difficult to solve than is the case with artificial fertilisers. There are at least four aspects of the problem to be considered :

- (1) The quality of the different foods offered for sale. This can be determined by reference to the particulars of composition which a seller must give a purchaser in accordance with the Fertilisers and Feeding Stuffs Act.
- (2) The physical condition of the foods, and if fresh or stale.
- (3) The suitability of the foods for the purpose in view.
- (4) The comparative values of the foods at the prices quoted.

The chief concern of this section of the Report is comparative values and, therefore, that aspect of the problem will be considered specifically.

The proteins play a part in the nutrition of the animal which cannot be taken by either carbohydrates or oils. In addition to this, the proteins, carbohydrates and oils have very different values for the production of energy or fat. It therefore follows that the simple procedure of totalling the percentages of these three ingredients and dividing this total into the price per ton in order to obtain a value for a unit of the food-stuff is quite unsound. Various methods have been used to compare the values of different feeding stuffs, but none is completely satisfactory. For practical purposes the least cumbersome is the

method whereby the food-stuffs are placed in groups of similar composition, and the values of the members of each group are then compared by consideration of (a) their protein equivalents, and (b) their starch equivalents. The starch equivalent is the number of pounds of starch which would be required to produce the same amount of "fat" in an animal as 100 pounds of the food-stuff in question. It is essentially a measure of the fat-producing value of the food-stuff. The protein equivalent is the number of pounds of digestible true protein, plus half the number of pounds of non-protein nitrogenous substances such as amides, present in 100 pounds of the foodstuff. It is a measure of the value of the food-stuff to the animal as a source of protein.

By this method all foods can be reduced to comparable standards based on (1) the protein equivalent, and (2) the starch equivalent.

The next stage in comparing values is to determine the cost of a unit of protein equivalent and of starch equivalent in the different foods which are being compared, and to enable the reader to do this the protein and starch equivalent figures for the different foods are given on the table on page 285, and also the cost per unit of protein equivalent and of starch equivalent in each case. These costs have been determined by dividing the protein equivalent figure and the starch equivalent figure, respectively, into the current price per ton, and the lower the quotient figures thus obtained the cheaper is the particular food as a source of protein or of starch equivalent as the case may be.

However, it would be quite misleading to compare the cost of a unit of protein equivalent in a protein food (which is purchased principally for its protein) with the cost of a similar unit in a starchy food. In other words, foods such as maize meal and pollard cannot be compared on the basis of cost of protein equivalent with foods such as decorticated cotton cake and meat meal.

The best course to adopt is to consider for what purpose the particular food is required, decide what foods are suitable for that purpose, examine the samples of these different foods which are offered and, if all appear to be satisfactory, apply the unit value system of determining which one provides protein equivalent or starch equivalent at the cheapest rate. A few examples may be helpful in explaining the procedure.

- (1) Suppose it is intended to purchase a protein food for the purpose of balancing a ration for dairy cows. The protein foods suitable for dairy cows are decorticated cotton cake, decorticated earthnut cake and soya bean meal. From the table on page 285 it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows:—

Decorticated cotton cake	...	...	5/7d.
Decorticated earthnut cake	...	...	4/6d.
Soya bean meal	...	...	5/7d.

Accordingly decorticated earthnut cake is the cheapest source of protein.

- (2) A protein food is required as a milk substitute to balance the ration for fattening pigs. The foods suitable for this purpose are soya bean meal, meat meal and meat and bone meal. Referring again to the table, it is seen that at the current average prices of these foods the cost of the unit of protein equivalent in each is as follows :—

Soya bean meal	...	...	5/7d.
Meat meal (60% protein)	...	...	5/6d.
Meat and bone meal (40% protein)	...	...	5/9d.

Therefore meat meal (60% protein) is the cheapest milk substitute for pigs at the present prices of purchased foods suitable for pigs. This example shows also how the price per ton may mislead a purchaser into thinking he is being economical when he buys at the cheapest price. The 60% meat meal costs 4/8d. per cwt. more than the 40% meat and bone meal, and yet it is a cheaper source of protein than the latter. Besides, a lesser proportion in the meal mixture will suffice, and having usually a lower content of oil than the 40% grade, it is likely to prove more satisfactory than that grade both from the thriving point of view and its effect on the quality of the bacon.

- (3) Whether is it more economical to feed white pollard than brown pollard or white bran than red bran, even though the prices per ton of the white grades are higher than those of the brown or red grades? The figures in the table show that the cost of both the unit of protein equivalent and of starch equivalent is less for the brown pollard than the white, and less for the red than the white bran. It follows, therefore, that at current prices the coloured grades of pollard and bran are cheaper than the white grades. It should be remembered in this connection, however, that the comparison of costs in these cases has been made on the assumption that the composition of the coloured grades is the same as that of the white grades. A pollard containing say, 8 per cent. fibre, even if of a white colour, would have a far lower feeding value than one containing only 4 per cent. of fibre. Colour is not a guide as to the feeding value of pollard or bran.

TRADE AND PRICES OF LIVE STOCK AT BELFAST AUCTION MARTS.

Supplies of fat cattle at the Belfast auction marts during the month of August, 1938, were again larger than in the previous month, and about average for the time of year. Prices showed a further considerable decline from the levels of July, and finished 3/3d. cheaper at an average of 35/- per live cwt. During the first week of the month trade worsened considerably despite the good quality of the offerings. Cross-Channel buyers were cautious in making purchases, and their interest flagged after their immediate requirements were filled. The average price consequently declined. In the following week business was fairly brisk, and the average price firmed. In the third week of the month trade showed a further slight improvement at still firmer rates, but in the following week, although trade continued on similar lines, the average price declined. For the last week of the month there was a slight reaction in trade, shippers being very active, and there was a consequent slight improvement in price.

The following table shows the average prices of fat cattle during the past five weeks compared with the corresponding dates in 1937.

<i>Week ended</i>	<i>per cwt.</i>	<i>Week ended</i>	<i>per cwt.</i>
6th August, 1938 ...	35/-	7th August, 1937 ...	41/3
13th " " ...	35/3	14th " " ...	41/6
20th " " ...	35/6	21st " " ...	42/3
27th " " ...	34/3	28th " " ...	41/6
3rd September, 1938 ...	34/9	4th September, 1937 ...	40/9
Average for month ...	<u>35/-</u>	Average for month ...	<u>41/6</u>

The supply of store cattle at the marts was much larger than in July, but the numbers remained below those of June. The quality generally was fairly good, and the demand on the whole was steady, with prices at the close of the month again down on the month. A feature of the store cattle sales was the number of small animals exhibited. Demand for the normal supplies of dairy cattle moved on similar lines as for stores. Prices in this section of the trade appreciated from the levels of July.

Seasonably heavier supplies of sheep and lambs were a brisk trade all month, especially for the cross-Channel business. Shippers were very active and purchased the best qualities. Much business was done also by seaside butchers. Prices, however, weakened from the levels of a month ago, and continued well below those ruling at the corresponding month last year.

PRICES OF OTHER STOCK AT THE BELFAST AUCTION MARTS.

Description.	Range of	Week ended 6-8-38	Week ended 13-8-38	Week ended 20-8-38	Week ended 27-8-38	Week ended 3-9-39
Fat Cows	Range of 1st quality " 2nd "	£12 to £17 £5 to £13	£12 to £17 £5 to £12-10	£13 to £17-10 £5 to £13	£13 to £16-10 £10 to £13-10	£12 to £16 £8 to £13-10
Store Cattle :	Range of 1st quality " 2nd "	£13 to £14-15 £11-10 to £13	£13 to £15-5 £11-10 to £12-15	£12-10 to £14 £11-5 to £12-5	£12-10 to £14 £11-10 to £12-5	£12 to £13-12-6 £8-7-6 to £11 10
Calves (under 12 months)	" 1st " 2nd "	£9-5 to £11 £6-17-6 to £8-10	£9 to £11-5 £7-17-6 to £8-15	£9 to £10-15 £7-7-6 to £8-15	£8-10 to £10-10 £7-7-6 to £8-5	£7 to £9-10 £5-2-6 to £6-15
Dairy Cattle :	Range of 1st quality " 2nd "	£22 to £27 £16 to £21	£21 to £27 £16 to £20	£21 to £27-10 £16 to £20	£21 to £27 £16 to £20	£22 to £27 £16 to £21
Springers	" 1st " 2nd "	£20 to £23 £16 to £19-10	£20 to £23 £15 to £19	£20 to £26 £16 to £19	£20 to £25 £16 to £19	£21 to £26 £16 to £20
Sheep and Lambs :	Range of 1st quality " 2nd "	27/- to 37/- 22/- to 29/-	27/- to 38/- 15/- to 29/-	28/- to 35/- 23/- to 29/-	30/- to 35/- 22/- to 30/-	28/6 to 39/6 24/- to 31/-
Blackface Ewes	" 1st " 2nd "	24/- to 29/- 16/- to 24/-	20/- to 31/- 17/- to 24/-	23/- to 35/- 18/- to 27/6	23/- to 30/- 18/- to 24/-	22/- to 32/- 18/- to 26/-
Crossbred & White Lambs	" 1st " 2nd "	27/- to 37/- 18/- to 29/-	27/- to 40/- 18/- to 28/-	28/- to 40/- 18/- to 29/-	28/- to 38/- 21/- to 30/-	27/- to 35/- 18/- to 27/6
Crossbred & White Hoggets	" 1st " 2nd "	26/- to 31/-	28/- to 32/6 20/- to 27/-	— —	— —	28/- to 33/- 22/- to 27/-
Blackface Hoggets	" 1st " 2nd "	18/- to 22/- 14/- to 17/-	25/- to 26/6 22/6 to 24/-	— —	— —	18/- to 20/- 15/6 to 17/6
Rams	" 1st " 2nd "	30/- to 42/- 26/- to 34/-	35/- to 38/- 24/- to 33/-	30/- to 36/- 28/- to 30/-	33/- to 44/- 25/- to 34/-	35/- to 41/- 28/- to 35/-

PRICES OF LIVE STOCK.

Average prices of Live Stock at Fairs during the month of August, 1938.

Date	Fair	Calves (under 9 months)	Store Cattle	Fat Cattle (18 months and over)	Springers		Milch Cows	Fat Lambs (under 12 months old)	Feeding Lambs (under 12 months old)	Young Pigs
					Cows	Heifers				
		Per head £ s.	Per cwt. Live weight	Per cwt. Live wgt.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.
2	Omagh	7 0	37/6 to 40/-	35/-	16 0	14 10	14 0	†1 5	—	—
2	Strabane	5 15	40/- to 43/-	35/-	12 0	—	—	—	—	—
3	Londonderry	—	35/- to 41/-	36/6	17 0	16 0	—	—	—	6/6
3	Rathfriland	6 9/3	34/- to 40/-	34/-	16 10	17 0	16 10	†1 3/6	†0 11/6	1 8/6
5	Moy	—	33/- to 38/-	33/-	14 0	14 17/6	13 0	†1 16/6	—	—
8	Irvinestown	7 5	38/- to 40/-	35/-	15 10	16 0	15 10	†1 6/3	—	1 10
9	Dungiven	—	33/6 to 39/-	34/-	—	16 0	—	†1 5	—	1 6
10	Crossgar	5 18	35/- to 37/-	—	18 0	—	—	—	—	1 16
10	Enniskillen	6 0	30/- to 35/-	33/-	12 0	13 10	12 0	*1 5	—	1 13
10	Kilrea	—	36/6 to 42/-	36/-	20 0	19 0	14 15	†1 5	—	1 10
12	Ballygawley	5 15	26/- to 42/6	32/6	15 0	—	13 0	†1 4	†1 5	1 13/6
15	Camlough	6 0	32/- to 38/6	32/9	17 0	16 0	14 10	†1 4	†0 12/6	—
17	Lisnaska	6 10	35/- to 38/6	33/-	17 10	15 10	14 10	†1 4	—	1 11
18	Ballymoney	—	36/- to 38/-	—	19 0	—	18 10	†1 4	—	1 8/6
18	Ballynahinch	5 13/4	36/- to 39/-	34/-	18 0	16 0	17 0	—	—	1 15
20	Portadown	7 0	37/6 to 40/-	33/-	16 5	15 0	15 0	†1 7/6	—	1 17/6
22	Fintona	6 18	37/6 to 42/-	32/-	16 0	15 10	14 15	†1 4	†0 18	1 11/6
22	Money more	—	36/- to 40/-	32/6	20 10	18 0	—	—	—	1 7/6
25	Antrim	5 0	34/- to 37/6	31/-	14 0	—	11 0	†1 2	—	1 5
26	Castlederg	—	37/- to 38/6	34/-	12 10	—	13 0	—	†1 3/6	—
26	Killylea	5 10	27/6 to 41/6	—	21 0	19 0	19 10	—	—	1 12
27	Ballymena	6 0	38/- to 42/-	35/-	20 15	18 0	18 5	†1 3	†0 18/6	1 10
30	Ballycastle (Lammas)									

* Long Wool.

† Downs and Crossbred.

‡ Mountain.

IMPORTS AND EXPORTS

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 31st July, 1938, and the seven months ended 31st July, 1938, with comparative figures for the corresponding periods in 1937. This information also includes trade with Eire across the land boundary.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY	IMPORTS				EXPORTS		
	Month ended 31st July.		Seven months ended 31st July.		Month ended 31st July.		Seven months ended 31st July.
	1938	1937	1938	1937	1938	1937	1937
Bacon cwt.	5,138	3,643	26,854	21,328	32,717	16,930	196,548
Hams "	1,384	1,765	9,731	10,316	11,107	9,702	70,261
Pork "	3	132	699	3,591	2,204	2,624	20,517
Butter "	16,046	15,653	121,752	128,571	1,036	502	1,731
Eggsgt. hds.	84,115	66,133	738,983	668,223	312,287	408,574	2,298,289
Oat Products (inc. Oatmeal)/cwt.	2,283	1,906	12,067	13,650	1,907	2,359	51,035
Potatoes tons	37	226	2,582	6,041	*3,090	*2,075	*135,331
Poultry cwt.	104	163	1,388	2,131	8,873	11,999	116,940
Grass Seeds "	339	126	14,062	6,697	6,505	3,272	232,859

* These figures represent the quantities of potatoes inspected by the Ministry of Agriculture for shipment.

There were 2,857 cwts. of oats imported direct from abroad during July. There were no imports during the corresponding month last year.

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 21 fairs in Northern Ireland, during the months of August, 1937, and July and August, 1938 :—

Description of Live Stock.	August, 1937.		July, 1938.		August, 1938.	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ..	5,935	4,785	6,647	3,288	5,867	3,344
Fat Cattle ..	958	850	1,222	1,103	1,271	1,070
Dairy Cattle ..	1,307	1,045	1,367	950	1,465	940
Sheep ..	677	480	211	164	503	245
Lambs ..	3,606	2,962	2,261	1,902	5,141	3,452
Young Pigs ..	3,067	2,765	3,306	2,559	2,999	2,507

ACCOUNT OF TRADE AT FAIRS.

There were again small supplies of store cattle at fair centres last month. Trade continued quiet throughout, and large numbers of cattle were unsold. Quality generally was good, and the animals were shown in fair to good condition. The usual cross-Channel buyers attended the fairs, but they were only in quest of best quality stock. Best types were, therefore, readily disposed of at about late rates, but other cattle were difficult to sell and prices for these continued their downward course. Strong stores for early finishing remained in favour at most centres, and values for this class of stock were fairly well maintained. Well-conditioned young stock were also easily cleared, but poor types generally were almost unsaleable.

Fat cattle were in medium supply throughout the country. The animals were well finished and up to a good standard of quality. Demand was satisfactory, a good enquiry ruling all month, but prices fell below the levels of the previous month. Nicely finished medium weight cattle again attracted most attention. Along the land border trade was slower, the demand being almost confined to local dealers.

The numbers of dairy cattle shown at fairs were of small to medium dimensions. Trade in this end ruled on rather better lines than for store cattle. The best cattle met a brisk trade, and second qualities were also fairly easy to dispose of. Generally speaking, however, prices showed a further slight decline on the month. Rough types of cows and those with bad udders were neglected.

Sheep and lambs continued to be much more plentiful at fairs than a year ago. There was a medium volume of trade, but prices declined on the month, and were well below those ruling at the corresponding dates a year ago. Strong cross-bred fat lambs for immediate slaughter were in best demand, but even for these prices were lower.

Medium supplies of young pigs were offered for sale at the August fairs, and the demand continued quietly steady at prices which showed very little alteration on the month. Store pigs were in fair request, and prices remained firm on the month. Small numbers of fairly good quality brood sows were a dull trade at most centres. Useful strong sows of the York type were in best demand and prices remained at last month's levels. The general range was from £6 to £10 10s. 0d. each, with a few pedigree animals up to £15 each.

12th September, 1938.

This report is issued free on application to the Secretary,
Ministry of Agriculture, Stormont, Belfast.

MINISTRY OF AGRICULTURE.

List of Leaflets and other Publications.

LEAFLETS.

- | | | | |
|--------|---|--------|---|
| No. 1. | Flax Seed | No. 46 | Hints for Winter Egg Production. |
| " 2. | Improvement of Farm Poultry. | " 47 | The Care and Management of Sheep. |
| " 3. | Feeding for Egg Production. | " 49 | American Gooseberry Mildew. |
| " 5. | The Dishorning of Calves. | " 50 | Potato Blight. |
| " 6. | The Packing of Apples in Standard Boxes. | " 51 | Butter-making on the Farm. |
| " 7. | Potato Trials. | " 52 | Gapes in Chickens. |
| " 9. | The Renovation of Orchards. | " 54 | The Breeding and Rearing of Calves. |
| " 10. | Fruit Tree Pests—Capsid Bugs. | " 55 | Destruction of Ragwort or Benweed. |
| " 11. | Fruit Tree Pests—Aphides and Apple Sucker. | " 56 | Identification of Egg Supplies. |
| " 12. | Fruit Tree Pests—Caterpillars. | " 57 | How to have Eggs of First Quality. |
| " 13. | Contagious Abortion in Cattle. | " 58 | How the Fertilisers and Feeding Stuffs Act benefits the Farmer. |
| " 14. | Cheese-making on the Farm. | " 59 | Bacillary White Diarrhoea (Pullorum Disease). |
| " 15. | Suitable Varieties of Fruit. | " 60 | Advantages of Winter Agricultural Classes. |
| " 16. | The Feeding of Dairy Cows. | " 61 | The Care and Management of Breeding Bulls. |
| " 17. | Home Bottling of Fruits and Vegetables. | " 62 | The Production of Timber on the Farm. |
| " 18. | Marketing of Dead Poultry. | " 63 | Sheep—Castration, Docking, Foot-Rot and Care of Feet. |
| " 19. | How to Feed Linseed. | " 64 | The Destruction of Warble Fly Maggots in Cattle. |
| " 20. | The Hatching and Rearing of Chickens. | " 65 | The Packing of Apples in Barrels. |
| " 21. | The Uses and Advantages of Portable Poultry Houses. | " 66 | Seed Testing Facilities for Traders. |
| " 22. | Leather-jacket Grubs. | " 67 | The Cultivation of Vegetables. |
| " 23. | The Handling and Care of Wool. | " 68 | The Cultivation of Strawberries. |
| " 24. | Fluke in Sheep. | " 69 | The Construction of Piggeries. |
| " 25. | The Rearing and Management of Young Horses. | " 70 | Ringworm. |
| " 26. | Ordnance Survey Maps for Farmers. | " 71 | The Cultivation of Raspberries. |
| " 27. | How to Keep Eggs Clean. | " 72 | Tree Planting for Shelter and Ornament. |
| " 28. | The Construction of a Laying House for Poultry. | " 73 | The Propagation and Maintenance of Healthy Stocks of Potatoes. |
| " 29. | The Selection and Breeding of Laying Hens. | " 74 | New Pure Strains of Flax. |
| " 31. | Coccidiosis in Poultry. | " 75 | Pig Production and the Pigs Marketing Scheme. |
| " 32. | Roup of Poultry (Fowl Pox). | " 76 | Acarine (Isle of Wight) Disease of Bees. |
| " 33. | Spraying Calendar for Apple Orchards. | " 77 | Licensing of Milk Producers and Distributors. |
| " 34. | The Pruning of Apple Trees. | " 78 | Graded Milk. |
| " 35. | The Fattening of Pigs. | " 79 | The Picking and Storing of Apples. |
| " 36. | Advantages of Milk Recording. | " 80 | Hoose or Husk in Farm Stock. |
| " 37. | The Raising and Fattening of Turkeys. | " 81 | The Construction of Cow Houses. |
| " 38. | The Destruction of Charlock. | " 82 | White Scour in Calves. |
| " 39. | The Production of Clean Milk. | " 83 | The Care, Management and Feeding of the Poultry Breeding Stock. |
| " 40. | The Laying Down and Management of Temporary Pastures. | " 84 | Lime and Liming. |
| " 41. | Blackleg, Blackquarter or Quarterill. | " 85 | The Growing of Trees. |
| " 42. | The Purchase of Balanced Rations for Dairy Cows | | |
| " 43. | Tuberculosis in Poultry. | | |
| " 44. | Results of Crop Experiments. | | |
| " 45. | The Breeding and Rearing of Pigs. | | |

CIRCULARS.

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| No. 5. | Why Pay a Tax on the Horns of Cattle? |
| " 8. | Basic Slag. |
| " 9. | Smut in Oats. |
| " 10. | Purchase of Fertilisers and Feeding Stuffs. |
| " 11. | Fertilisers and Feeding Stuffs Act—General Summary. |
| " 12. | The Treatment of Liver Fluke. |
| " 13. | The ox-Warble Fly. |
| " 306. | Fertilisers and Feeding Stuffs Act, 1926—Revision of Regulations. |

MISCELLANEOUS PUBLICATIONS.

Store Cattle.
 Reports on Egg-Laying Tests.
 Crop Insurance.
 List of Growers of Certified Crops of Immune Varieties of Potatoes.
 List of Growers of Certified Crops of Non-Immune Varieties of Potatoes.
 The Ministry's Monthly Report.
 Register of Premium Stallions.
 Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
 Guide to the Marketing of Fruit Act (Northern Ireland), 1932.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated:—

- (1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
- (2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
- (3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
- (4) The Agricultural Output of Northern Ireland, 1925. Price 2/6 net.